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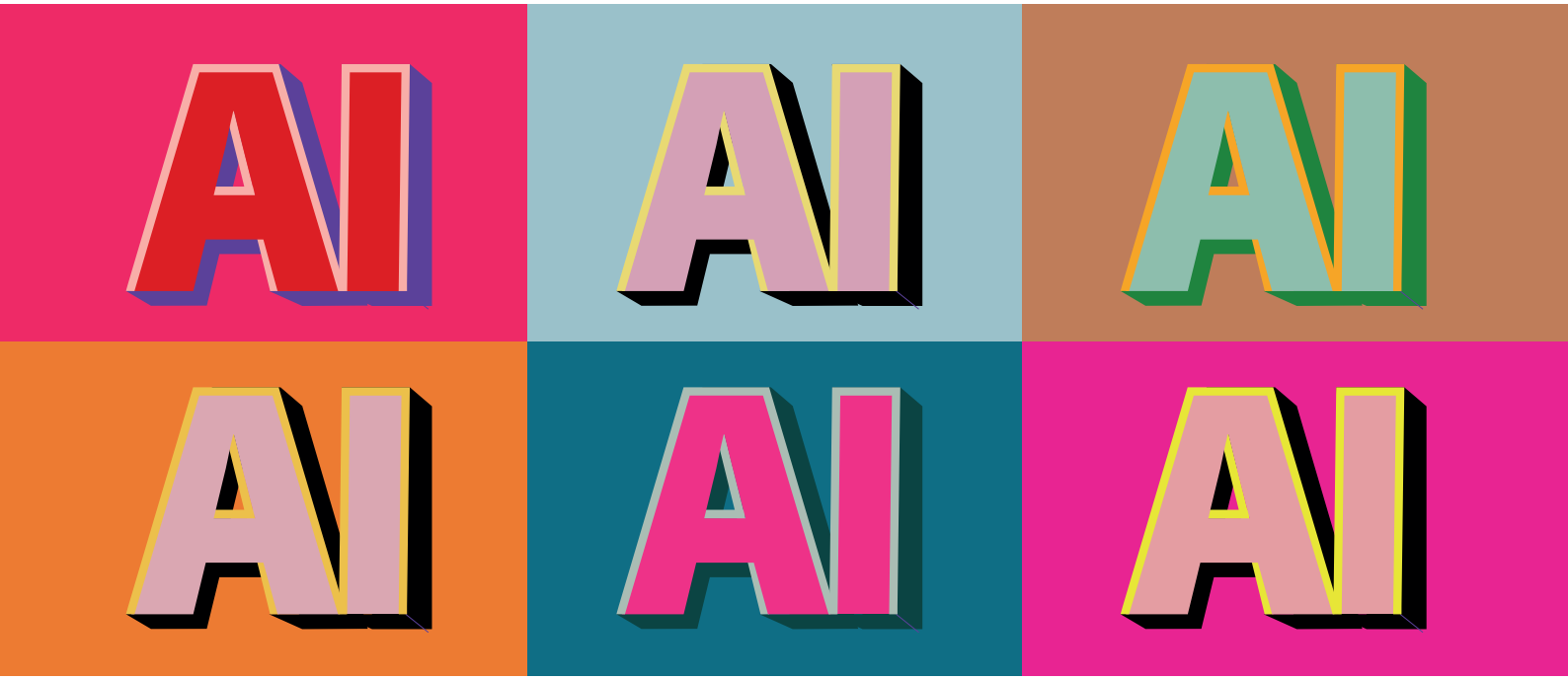

ECONOMIC & FINANCIAL ENVIRONMENT

DOSSIER: THE PRESENT AND FUTURES OF THE NEW *AI*CONOMY

CaixaBank Research

MONTHLY REPORT - ECONOMIC AND FINANCIAL MARKET OUTLOOK
May 2026

The *Monthly Report* is a publication developed jointly by CaixaBank Research and BPI Research (UEEF)

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Economy and markets between two tides: geopolitics and artificial intelligence

The most positive (and surprising) aspect of recent weeks in the economic landscape has been the financial sector's response to the heightened uncertainty caused by geopolitical instability. There are no precedents for an energy shock of this magnitude without a noticeable tightening of financial conditions. However, on this occasion, the initial risk-off movement moderate, and in some market segments it has been almost completely reversed. Indeed, as the conflict enters its third month, with significant distortions in energy and trade flows, many stock markets are above their pre-conflict levels – in some cases even reaching all-time highs. Moreover, there have been no overreactions in currency markets. Even bond yields are reflecting limited concern about inflation and medium-term fiscal balances, beyond pricing in changes in the monetary policy outlook at the short end of the curve – something we all would have signed off on 28 February.

This may be the calm before the storm or reflect the difficulty of incorporating geopolitical risk into financial asset valuations. However, this gap between the financial channel and the harsh geoeconomic reality is proving to be an important lever for mitigating the impact of geopolitical risk on the real economy. It could be argued that behind this disconnection lies investors' excessive confidence in the resilience of the business cycle and in central banks' ability to keep inflation expectations in check and limit second-round effects on prices, a key factor for financial stability. But perhaps the most important support for this market optimism lies in the beneficial effects that artificial intelligence (AI) could have on productivity and potential medium-term growth, more than offsetting the impact of any negative shock on the supply curve.

In other words, although our attention will remain focused for a while on geopolitics and all its derivatives, the elephant in the room remains the medium-term implications of AI on macroeconomic variables. The risk is of being overly optimistic, but the tip of the iceberg of this megatrend is promising, considering the initial positive effects on US growth and on the earnings of firms in the sector. As a case in point, investment in technology in the US (processing equipment, software and research and development) has been growing at a year-on-year rate of 15% over the past six months, establishing itself as the main driver of growth. Since the emergence of ChatGPT three years ago, the so-called Magnificent Seven have accounted for more than 50% of the earnings growth of the S&P 500 and 60% of the cumulative rise in its market capitalisation.

In this context, we have dedicated our May Dossier to this new technology, which is becoming a priority in economic competition among the major powers. The strategies adopted vary widely, from the American goal to define the technological frontier, leveraging its competitive advantages in human capital and technological capabilities, to China's prioritisation of optimising the global industrial value chain and scale, as well as security (see the article: «Differentiated strategies for governing AI: towards cooperation or conflict?»). Meanwhile, Europe, facing the risk of falling behind, has intensified the debate on balancing regulation, competitiveness and scale. At the same time, it is attempting to establish a common governance framework to leverage the strength of its scientific and research base and reduce its high external dependency for semiconductors and foundational models. In other articles we examine the adoption of AI in the Spanish economy and how it could affect productivity growth and the labour market (see the article «Productivity and employment in the face of generative AI: what do we know?»). Our analysis reveals that, although aggregate estimates vary greatly depending on the assumptions used about the proportion of tasks affected by AI (and the average productivity gain in those tasks), in the most reasonable scenario, medium-term productivity improvements of up to 1 pp annually can be expected in the US and around half of that in Europe. This would not be an instant revolution, but it would represent a step change for potential growth. That is precisely what financial markets are anticipating, rightly or wrongly, when they try to look beyond the noise of geopolitics. They are walking the thin line that separates hopes for a new industrial revolution from fears of its effects on inequality and employment.

José Ramón Díez
May 2026

Chronology

MARCH 2026

1-10 The Artemis II mission travels to the Moon and reaches 406,771 km, the greatest distance from Earth ever achieved by a manned mission.

FEBRUARY 2026

20 The US Supreme Court invalidates the tariffs announced under the IEEPA.
28 The US and Israel launch a coordinated attack against Iran in which Ali Khamenei is killed.

DECEMBER 2025

10 The Fed cuts rates by 25 bps, placing them in the 3.50%-3.75% range.
18 The Bank of England cuts rates by 25 bps, to 3.75%.
19 The Bank of Japan raises rates by 25 bps, to 0.75%.

MARCH 2026

11 The International Energy Agency agrees to release 400 million barrels of strategic reserves to mitigate the impact of the war in the Middle East.

JANUARY 2026

14 2025 was the third warmest year on record (1940-2025) and 1.5 °C above the pre-industrial average (1850-1900) according to the EU's Copernicus programme.
27 The EU and India conclude negotiations for a Free Trade Agreement.

NOVEMBER 2025

12 End to the longest government shutdown in US history.

Agenda

MAY 2026

4 Portugal: industrial production (March).
5 Spain: registration with Social Security and registered unemployment (April).
6 Portugal: employment and unemployment (Q1).
8 Spain: industrial production index (March).
15 Portugal: average monthly gross salary per worker (Q1).
Portugal: DBRS rating.
18 Japan: GDP (Q1).
19 Spain: foreign trade (March).
25 Spain: loans, deposits and NPL ratio (March).
28 Euro area: economic sentiment indicator (May).
29 Spain: CPI flash estimate (May).
Spain: DBRS rating.
Portugal: GDP breakdown (Q1).
Portugal: CPI flash estimate (May).

JUNE 2026

2 Spain: registration with Social Security and registered unemployment (May).
Euro area: CPI flash estimate (May).
9 Portugal: international trade (April).
11 Governing Council of the European Central Bank meeting.
16 Spain: quarterly labour cost survey (Q1).
16-17 Federal Open Market Committee meeting.
18-19 European Council meeting.
22 Portugal: resident population (2025).
23 Spain: balance of payments and NIIP (Q1).
Portugal: house prices (Q1).
24 Portugal: GDP breakdown (Q1).
25 Spain: GDP breakdown (Q1).
Portugal: NPL ratio (Q1).
26 Spain: loans, deposits and NPL ratio (Q1 and April).
29 Spain: CPI flash estimate (June).
Euro area: economic sentiment indicator (June).
30 Spain: household savings rate (Q1).
Portugal: CPI flash estimate (June).

Hormuz: time is against us

The economic impact of the war with Iran is yet to be written. If a deal is reached in the short term and the movement of goods through the Strait of Hormuz resumes relatively quickly, the macroeconomic effect could be limited. Amid the recent emphasis on the downside risks, it is important not to lose sight of this scenario. Not only is it plausible, but it could be the most likely. Indeed, the fact that the market reaction to date has been contained – with the main stock market indices near all-time highs – points in that direction. If this scenario materialises, the Spanish economy could maintain dynamic growth.

The starting point is solid. This is confirmed by the main indicators for Q1 published recently, along with the first figures available for Q2. GDP grew by 0.6% quarter-on-quarter and by 2.7% year-on-year, slightly above what was forecast in our scenario at the start of the year, before the outbreak of the conflict. The composition of growth remains favourable: it rests on domestic demand, particularly household consumption and investment, which consolidated the strong momentum of recent quarters and maintained a growth rate exceeding 5% year-on-year. Services exports are showing no signs of exhaustion either, in both the tourism sector and the non-tourism sector. This positive tone in economic activity was also accompanied by a strong labour market: according to the LFS, employment was up 0.4% quarter-on-quarter in seasonally adjusted terms.

High-frequency indicators suggest that this inertia has persisted at the start of Q2, despite the conflict already lasting two months. The CaixaBank Research Consumption Monitor, with data up to April, shows that domestic consumption expenditure continues to grow at a steady pace. This growth is supported by categories such as leisure and catering, which have been booming for several quarters now, while spending on fashion, furniture and decoration have recently joined the trend. These categories are particularly sensitive to the perception of the economic environment. Their strength thus suggests that households are confident in the resilience of the Spanish economy amid a challenging context. There are several factors influencing this perception: the resilience of the labour market; inflation, which although above 3% is showing no signs of acceleration, and interest rates, which have increased only slightly and remain far from the levels reached after the outbreak of the war in Ukraine.

With this starting point, if the conflict were resolved quickly and energy prices eased, the new shock should not materially affect the Spanish economy. Indeed, growth would probably end up being below the 2.4% envisaged in our forecast scenario, but it could still be above 2%. For reference, a 10-dollar increase in the oil price and a 10-euro rise in gas prices typically subtracts around 0.15 and 0.10 pps from growth, respectively. At the close of this report, futures prices for the entire year place the average price for 2026 some 30 euros above the levels that were expected before the conflict in the case of crude oil, and 15 euros higher in the case of gas. We must also consider the recent approval of a fiscal support package equivalent to 0.3 pps of GDP. Overall, the energy shock would have a noticeable impact, but insufficient to halt the expansion of the Spanish economy.

However, time is working against this more moderate scenario. The closure of the Strait of Hormuz has caused a significant deficit in global oil and gas production, which is currently unable to meet demand, and world stockpiles are rapidly being depleted. If the situation persists, some countries – particularly those in Asia or with lower purchasing power – could begin to experience supply issues. In this context, the reaction of markets would be unlikely to remain so complacent, energy prices would become strained and household confidence would ultimately be affected.

It is therefore advisable to consider all scenarios. There are plenty of reasons to believe the situation could escalate. But it is also not advisable to jump to conclusions. Time is against us, but the economy is still holding up.

Oriol Aspachs

Average for the last month in the period, unless otherwise specified

Financial markets

	Average 2000-2007	Average 2008-2019	Average 2020-2023	2024	2025	2026	2027
INTEREST RATES							
Dollar							
Fed funds (lower limit)	3.18	0.54	1.75	4.25	3.50	3.00	3.00
3-month SOFR	3.62	1.01	2.09	4.37	3.71	3.10	3.07
12-month SOFR	3.86	1.48	2.39	4.19	3.48	3.10	2.78
2-year government bonds	3.70	1.04	2.06	4.24	3.51	3.50	3.75
10-year government bonds	4.69	2.57	2.31	4.40	4.14	4.50	4.60
Euro							
ECB depo	2.05	0.20	0.61	3.09	2.00	2.00	2.00
ECB refi	3.05	0.75	1.11	3.24	2.15	2.15	2.15
€STR	–	–0.54	0.52	3.06	1.93	1.94	1.97
1-month Euribor	3.18	0.50	0.57	2.89	1.92	2.00	2.03
3-month Euribor	3.24	0.65	0.70	2.83	2.05	2.04	2.06
6-month Euribor	3.29	0.78	0.87	2.63	2.14	2.12	2.11
12-month Euribor	3.40	0.96	1.04	2.44	2.27	2.23	2.18
Germany							
2-year government bonds	3.41	0.35	0.56	2.02	2.13	2.04	2.00
10-year government bonds	4.30	1.54	0.72	2.22	2.84	2.95	2.90
Spain							
3-year government bonds	3.62	1.69	0.92	2.26	2.39	2.57	2.60
5-year government bonds	3.91	2.19	1.07	2.48	2.64	2.88	2.92
10-year government bonds	4.42	3.17	1.61	2.90	3.28	3.45	3.50
Risk premium	11	164	90	68	45	50	60
Portugal							
3-year government bonds	3.68	3.33	0.76	2.03	2.16	2.17	2.17
5-year government bonds	3.96	3.94	0.98	2.15	2.49	2.62	2.64
10-year government bonds	4.49	4.67	1.52	2.68	3.14	3.40	3.45
Risk premium	19	314	81	46	31	45	55
EXCHANGE RATES							
EUR/USD (dollars per euro)	1.13	1.26	1.12	1.05	1.17	1.20	1.20
EUR/GBP (pounds per euro)	0.66	0.84	0.87	0.83	0.87	0.90	0.90
EUR/JPY (yen per euro)	129.56	126.41	135.43	161.18	182.71	180.00	175.00
OIL PRICE							
Brent ($/barrel)	42.3	80.1	73.8	73.1	61.6	66.0	64.8
Brent (euros/barrel)	36.4	62.5	67.0	69.8	52.6	55.0	54.0

Forecasts

Change in the average for the year versus the prior year average (%), unless otherwise indicated

International economy

	Average 2000-2007	Average 2008-2019	Average 2020-2023	2024	2025	2026	2027
GDP GROWTH[1]							
Global	4.3	3.3	2.8	3.3	3.4	3.3	3.2
Developed countries	*2.7*	*1.5*	*1.7*	*1.8*	*1.7*	*1.9*	*1.7*
United States	2.7	1.8	2.4	2.8	2.1	2.6	2.0
Euro area	2.3	0.9	1.1	0.8	1.5	1.3	1.5
Germany	1.6	1.3	0.2	–0.5	0.3	1.0	1.4
France	2.3	1.0	0.9	1.1	0.9	1.0	1.2
Italy	1.5	–0.3	1.5	0.5	0.7	0.8	1.1
Portugal	1.5	0.4	1.9	2.1	1.9	2.1	1.9
Spain	3.6	0.7	1.1	3.5	2.8	2.4	2.0
Japan	1.4	0.4	0.1	–0.2	1.1	0.8	0.6
United Kingdom	2.8	1.3	1.0	1.1	1.3	0.7	1.4
Emerging and developing countries	*6.3*	*4.9*	*3.5*	*4.3*	*4.4*	*4.2*	*4.1*
China	10.6	8.0	4.9	5.0	5.0	4.5	4.0
India	7.2	6.7	4.6	7.3	7.5	6.6	6.4
Brazil	3.6	1.6	1.9	3.4	2.3	1.8	1.8
Mexico	2.3	1.5	1.1	1.4	0.6	1.3	1.8
Russia	–	1.4	1.5	4.3	1.0	1.1	1.1
Türkiye	5.5	4.5	6.4	3.3	3.6	3.4	3.4
Poland	4.1	3.7	2.6	3.0	3.6	3.5	3.2
INFLATION							
Global	4.1	3.7	5.9	5.8	4.1	3.9	3.5
Developed countries	*2.1*	*1.6*	*3.9*	*2.6*	*2.5*	*2.2*	*2.1*
United States	2.7	1.8	4.5	2.9	2.6	2.6	2.2
Euro area	2.2	1.4	4.2	2.4	2.1	1.9	2.0
Germany	1.7	1.4	4.6	2.5	2.3	2.0	2.1
France	1.9	1.3	3.5	2.3	0.9	1.3	1.7
Italy	–0.1	1.4	4.1	1.1	1.6	1.5	1.8
Portugal	3.1	1.1	3.4	2.4	2.3	2.1	2.0
Spain	3.2	1.3	3.7	2.8	2.7	2.4	2.2
Japan	–0.3	0.4	1.4	2.7	3.2	2.0	2.0
United Kingdom	1.6	2.3	5.0	2.5	3.4	2.5	2.1
Emerging and developing countries	*6.9*	*5.6*	*7.3*	*7.9*	*5.1*	*5.1*	*4.4*
China	1.7	2.6	1.4	0.2	0.1	1.0	1.5
India	4.6	7.3	6.0	5.0	2.2	4.1	4.0
Brazil	7.3	5.7	6.4	4.4	5.0	4.2	3.8
Mexico	5.2	4.2	5.6	4.7	3.8	3.9	3.8
Russia	14.3	7.9	7.5	8.5	8.7	6.0	4.5
Türkiye	22.6	9.6	39.5	58.5	34.9	26.1	19.9
Poland	3.5	1.9	8.2	3.7	3.4	2.6	2.6

Note: *1. Figures adjusted for seasonality and calendar effects for the euro area, Germany, France, Italy, Portugal, Spain and Poland. Figures adjusted for seasonality for the United States and the United Kingdom.*

Forecasts

Change in the average for the year versus the prior year average (%), unless otherwise indicated

Spanish economy

	Average 2000-2007	Average 2008-2019	Average 2020-2023	2024	2025	2026	2027
Macroeconomic aggregates							
Household consumption	3.7	0.0	0.4	3.0	3.3	3.0	2.1
Government consumption	4.5	0.9	3.1	2.9	2.4	1.4	1.8
Gross fixed capital formation	5.7	–1.2	1.0	3.6	5.8	5.2	2.5
Capital goods	4.9	0.2	–1.4	1.9	7.4	4.4	2.5
Construction	5.7	–2.6	0.4	4.0	5.2	5.6	2.4
Domestic demand (vs. GDP Δ)	4.4	–0.2	0.9	3.2	3.5	3.0	2.0
Exports of goods and services	4.7	2.9	2.4	3.2	3.6	2.1	2.1
Imports of goods and services	7.0	0.2	1.9	2.9	6.2	4.1	2.4
Gross domestic product	**3.6**	**0.7**	**1.1**	**3.5**	**2.8**	**2.4**	**2.0**
Other variables							
Employment	3.2	–0.5	2.0	2.8	3.1	2.5	1.8
Unemployment rate (% of labour force)	10.5	19.5	13.9	11.3	10.5	9.8	9.2
Consumer price index	3.2	1.3	3.7	2.8	2.7	2.4	2.2
Unit labour costs	3.1	0.6	4.1	3.3	4.2	3.6	2.7
Current account balance (% GDP)	–5.8	–0.2	1.2	3.2	2.9	2.7	2.9
External funding capacity/needs (% GDP)	–5.2	0.2	2.0	4.2	3.4	3.6	3.9
Fiscal balance (% GDP)[1]	0.3	–6.5	–6.1	–3.2	–2.4	–2.1	–2.1

Note: *1. Excludes losses for assistance provided to financial institutions.*

Forecasts

Portuguese economy

	Average 2000-2007	Average 2008-2019	Average 2020-2023	2024	2025	2026	2027
Macroeconomic aggregates							
Household consumption	1.7	0.5	1.5	3.0	3.5	2.6	2.1
Government consumption	2.2	–0.3	1.9	1.5	1.6	1.5	1.0
Gross fixed capital formation	–0.3	–0.6	3.7	4.3	3.6	5.4	2.2
Capital goods	3.3	2.7	6.3	8.4	–1.4	–	–
Construction	–1.4	–2.4	3.1	3.0	5.5	–	–
Domestic demand (vs. GDP Δ)	1.3	0.0	2.0	3.0	3.1	3.1	1.9
Exports of goods and services	5.3	4.0	3.8	3.2	0.4	2.2	4.1
Imports of goods and services	3.6	2.7	3.6	4.7	4.3	3.5	3.9
Gross domestic product	**1.5**	**0.5**	**1.7**	**2.2**	**1.9**	**2.1**	**1.9**
Other variables							
Employment	0.4	–0.4	1.4	1.2	3.2	1.9	1.5
Unemployment rate (% of labour force)	6.1	11.4	6.6	6.4	6.0	5.9	5.9
Consumer price index	3.1	1.1	3.4	2.4	2.3	2.1	2.0
Current account balance (% GDP)	–9.2	–2.9	–0.4	2.1	1.2	1.2	1.2
External funding capacity/needs (% GDP)	–7.7	–1.5	0.6	3.3	2.0	3.8	2.1
Fiscal balance (% GDP)	–4.5	–5.1	–1.9	0.5	0.7	–0.6	–0.5

Forecasts

Financial markets: a disconnect between risk and energy?

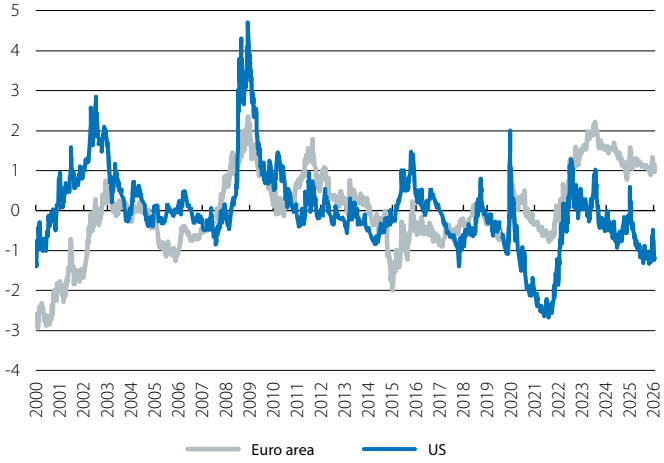
Uncertainty and risk appetite diverge in April. The conflict in the Middle East set the pace for financial markets in a month marked by very high uncertainty and as geopolitics continued to redefine the economic landscape. Despite the ceasefire, the price rally in energy and other products linked to hydrocarbons and the region (such as fertilisers and fuels) was consolidated. At the same time, central banks confirmed a shift towards a gradually more restrictive monetary policy (due to either expectations of interest rate hikes or a pause in previously anticipated cuts), causing sovereign yields to remain high. However, stock markets diverged from this trend and the main stock indices once again registered gains, spurred by renewed optimism around AI firms, the reporting of strong corporate earnings and a recovery in risk appetite.

Energy remains in distress... With the Strait of Hormuz closed, the International Energy Agency estimates that since March, around 10% of the global oil supply has been lost and that this decline has been cushioned mainly by previously accumulated stockpiles. The price of a barrel of Brent remained above 100 dollars for much of the past month and continued to show significant volatility, with some sessions seeing an easing of prices to just below 90 dollars per barrel while in others it exceeded 120 dollars. In the gas market, the European TTF benchmark traded in the range of 40-50 euros per MWh. For the 2026 average, futures markets continued to suggest prices at around 90 dollars per barrel of Brent and 45 euros per MWh for the TTF, 30% and 40% above pre-conflict levels, respectively. For 2027, they anticipate a moderation in prices to 75 dollars and 35 euros on average for the year (+10% vs. pre-conflict levels). Furthermore, these price tensions continued to spread to derivative products, with generic benchmarks in wholesale diesel and jet fuel markets rallying between +60% and +80% vs. pre-conflict levels. The rise in fertiliser (urea) prices was similar, with concerns that this could be passed on to food prices, which also rose in April (Bloomberg's agricultural index rose by over 3% in April and is up more than 10% in the year to date).

… and stock markets regain their risk appetite. In the US, the S&P 500 reached new all-time highs thanks to the tech sector rally and the advance of cyclical sectors (consumption, industry). European stock markets also recorded a significant and widespread rebound, with the Stoxx 600 EUR returning to positive territory for the year to date. The MSCI Emerging Markets indices were also up around 15% in 2026 in both Asia and Latin America. Sentiment found support in a strong earnings season. At the close of this report, with over 60% and 50% of firms in the S&P 500 and the Stoxx 600 EUR having reported their earnings, between 70% and 80% of US firms have exceeded expectations in sales and earnings, while around 50% beat forecasts in Europe (in line with previous seasons). In parallel, analysts continue to anticipate strong earnings growth for the year ahead (of around 20% and 10% in the US and Europe, respectively).

Financial conditions

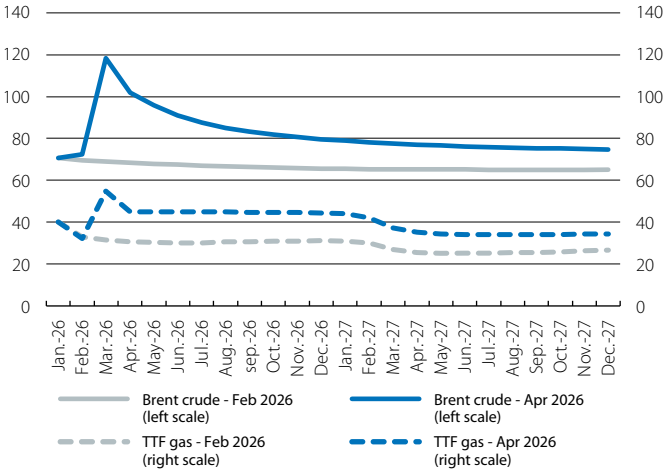
Index (0 = 2000-2026 average)



Note: *Goldman Sachs financial conditions indices normalised using the mean and standard deviation for the period 2000-2026.*
Source: *CaixaBank Research, based on data from Bloomberg.*

Oil and gas: futures curves

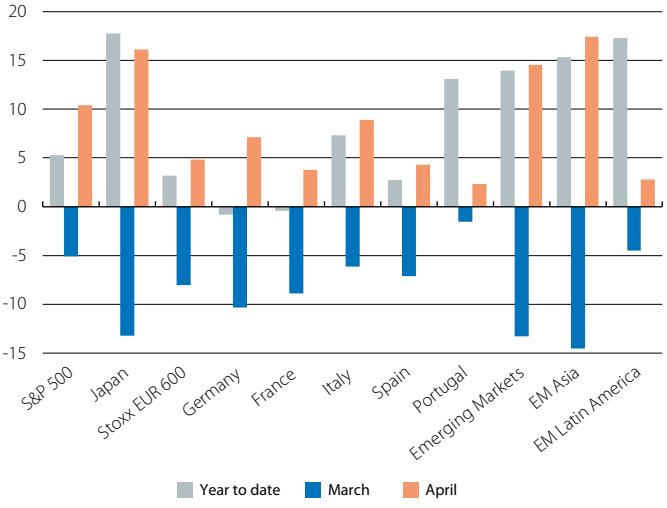
(Dollars per barrel) *(Euros per MWh)*



Note: *The reference prices for oil and gas correspond to futures prices two and one months ahead, respectively (e.g. Mar-2026 prices correspond to futures contracts for May [Brent] and April [TTF]).*
Source: *CaixaBank Research, based on data from Bloomberg.*

International stock markets: performance in 2026

Change (%)



Source: *CaixaBank Research, based on data from Bloomberg.*

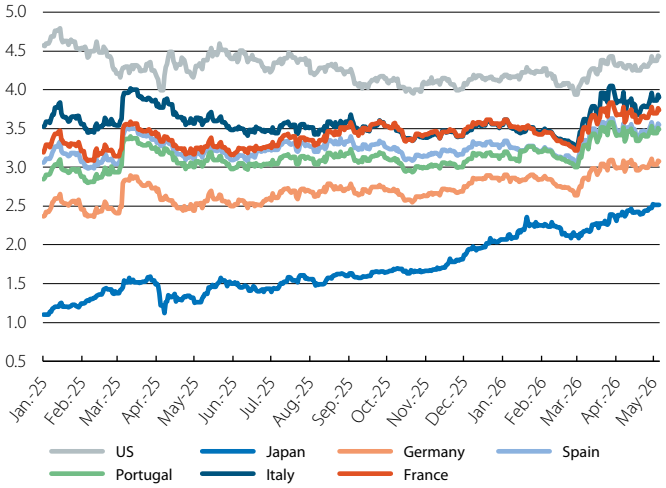
Interest rates are consolidating at higher levels. On both sides of the Atlantic, sovereign interest rates remained stressed. This was due to inflation expectations stemming from the energy shock in the Middle East (swaps were pricing in one-year inflation at around 3.5%, in both the US and the euro area), as well as the prospect of a more restrictive monetary policy than that anticipated prior to the bombings. US and German sovereign yields rose by almost 10 bps and 5 bps in the last month, with the short ends of the curves rising between 40 and 50 bps in the year to date (+20 bps at the long end). Risk premia in the periphery, in contrast, remained contained (just under 50 bps for Spain, just above 40 bps for Portugal) and Italy and France, which were initially under more strain, managed to moderately narrow their spreads relative to Germany. In the foreign exchange market, the euro regained some lost ground and appreciated to 1.17 dollars.

Change at the helm of the Fed, but no changes in rates. The Fed kept interest rates unchanged in April (fed funds rate in the 3.50%-3.75% range). This decision was expected, but the central bank struck a notably more cautious tone. The Fed expressed greater concern about inflation and indicated a reduced willingness to resume rate cuts (at the close of this report, markets were assigning less than a 10% probability to a rate cut in 2026). The meeting was marked by Jerome Powell's departure as chair. Departing from tradition, Powell will remain as a governor of the Fed until the legal attacks against the institution, which he considers a threat to its independence, are resolved in a final and transparent manner. His successor should be Kevin Warsh, pending his final confirmation by the Senate. The central banks of Japan and England adhered to expectations and kept rates at 0.75% and 3.75%, respectively. In both cases, hawkish signals dominated, with dissent in favour of raising rates, and markets are pointing to 25-bp hikes at their June and July meetings, respectively.

The ECB hints at a rate hike in June. The ECB kept interest rates unchanged in April (depo rate at 2.00%). The decision was unanimous, although President Lagarde herself acknowledged that a rate increase had been discussed. The ECB maintained a balanced tone in its communication, highlighting both the upside risks to inflation and the downside risks to activity stemming from the conflict in the Middle East. In an uncertain environment, it advocated maintaining a «meeting-by-meeting» and «data-dependent» approach, «not pre-committing to a particular rate path». However, the communication also hinted at a high likelihood of raising rates in June. The ECB highlighted that the war in the Middle East will drive inflation «materially above 2% in the near term». The direct effects on inflation are visible (in April, energy raised inflation to 3.0%) and there are signs of some indirect effects. With all this, Lagarde acknowledged that they will reassess the situation in the coming weeks, admitting that she is clear about the direction of monetary policy while expressing no discomfort with regard to financial market expectations (which in the last month continued to price in between two and three 25-bp hikes in the depo rate for the whole of 2026).

10-year sovereign interest rates

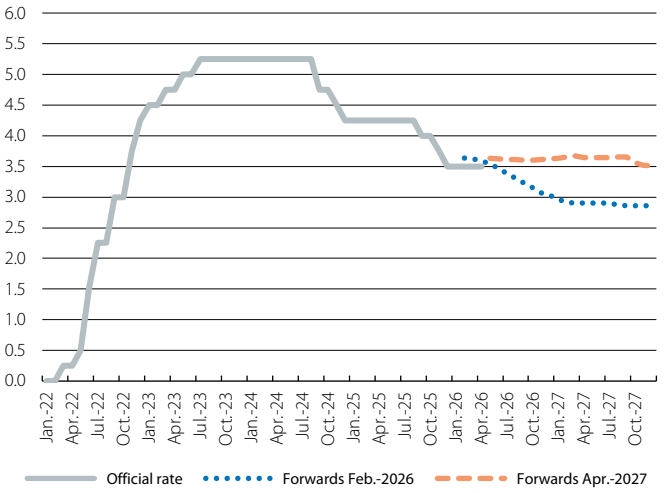
(%)



Source: *CaixaBank Research, based on data from Bloomberg.*

Fed: official rate (FFR) and expectations

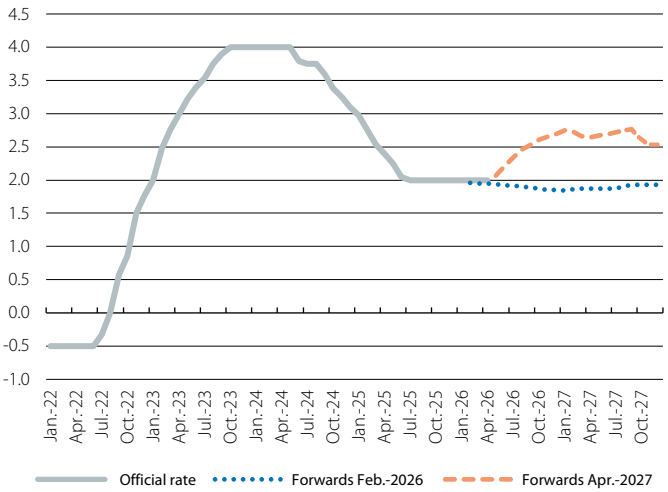
(%)



Source: *CaixaBank Research, based on data from Bloomberg.*

ECB: official rate (depo) and expectations

(%)



Source: *CaixaBank Research, based on data from Bloomberg.*

What markets tell us about macroeconomics

How do financial markets reflect macroeconomic surprises? Can we identify, in financial asset prices, which macroeconomic narrative dominates investor sentiment? This article presents an analytical model[1] to identify the macroeconomic factors that drive financial markets in the euro area and the US. It does so on the basis of correlations between different asset classes and daily high-frequency market data, spanning from June 2005 to the present.

Methodology

For each region, we examine daily data from different types of financial assets: interest rates (overnight rates and sovereign bonds), inflation expectations (inflation swaps), equities (stock and volatility indices), exchange rates and commodities (gold, oil and gas).[2]

We then analyse the co-movements between these assets and extract patterns (in the form of common factors) that allow us to identify different macroeconomic drivers of market movements.[3]

Main drivers

Our exercise identifies three major categories of macroeconomic shocks: demand, supply and monetary policy. Intuitively, an increase in demand stimulates both economic activity and price growth, which is reflected in rising stock market prices (higher corporate profits), inflation expectations and higher interest rates (both to compensate for inflation and due to the possibility of central bank rate hikes). Conversely, a contraction in supply depresses activity and raises prices (this may be caused by an increase in the cost of commodities, such as oil), resulting in stock market declines and higher interest rates (amid expectations of monetary tightening to combat inflation).

Finally, a dovish monetary policy shock (e.g. when a central bank signals it will cut interest rates) is associated with declines in sovereign rates, a depreciation of the domestic currency, and an increase in stock markets and inflation expectations (due to the support of monetary easing for economic activity).

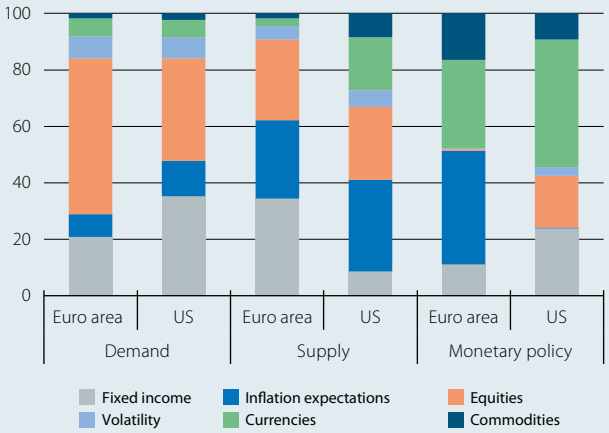
Asset movements in each type of shock

	Demand (–)	Supply (–)	Monetary policy (dovish)
Fixed-income securities	–	+	–
Inflation expectations	–	+	+
Equities	–	–	+
Volatility	+	+	=
Currencies	–	=	–
Commodities	=	+	+

Notes: *The signs (+), (–) and (=) indicate increases, decreases and stability, respectively, of the variables and of aggregate demand and supply. For fixed-income securities, by variables we refer to sovereign yields (so a decline corresponds to an increase in the bond price).*
Source: *CaixaBank Research.*

Importance of assets in each type of shock

(%)



Note: *The contribution of the variables is in terms of one standard deviation of each asset.*
Source: *CaixaBank Research, based on data from Bloomberg.*

Formally, these three macroeconomic market drivers are identified through the various expected co-movements between financial variables, as summarised in the first table.[4]

Macro drivers from a historical perspective

The model's results show that the nature of the shocks that drive financial markets varies widely depending on the historical episode and the region analysed. In the euro area, recessions – the global financial crisis, the sovereign debt crisis and the COVID-19 pandemic – were clearly dominated by demand shocks, which accounted for around 40%-50% of the sessions. This reflects an

1. The model is based on the one proposed by Matteo Crimella of Goldman Sachs in the 2019 article «French and Italian Spreads: A Tale of Macro, Policy and Politics».
2. For interest rates and inflation expectations, we take the daily variance, in pps, at the close of the session; for the rest, we take the daily percentage variance in the closing price.
3. We use a principal component analysis (PCA) on the standardised daily variations of all assets.
4. The three drivers correspond to the first three main components of the PCA. The resonance between the weight assigned by the PCA to each financial variable and the direction of the financial markets (increases or declines in the stock market, interest rates, etc.) determines which of the three drivers «dominates» a market session.

environment marked by deteriorating growth, stock market declines and falling inflation expectations. However, recent geopolitical crises present a different dynamic. During the war in Ukraine, the weight of supply shocks surged to 33%, during current tensions in the Middle East this figure has risen to 65%, highlighting Europe's high sensitivity to energy and supply disruptions. In the US, demand shocks also dominated during the economic recessions of 2008 and the pandemic, albeit with less intensity than in Europe, while monetary policy shocks play a structurally more significant role throughout the sample.

In fact, during the war in Ukraine, and especially during the recent Iran episode, the dominant driver in US markets has been monetary policy, accounting for 33% and 40% of sessions, respectively. Together, these results suggest that markets interpret the Iranian shock primarily as a supply-side inflationary risk in the euro area. In the US, in contrast, the market response is dominated by its implications for the future path of the Federal Reserve, given the relatively lower vulnerability of the US economy to increases in external energy prices, due to its status as a net energy producer and exporter.

Observations and technical notes on methodology and models

Although it falls outside the scope of this article, our model reveals seemingly technical details which nevertheless provide «narrative» insights worthy of discussion.

Firstly, the most notable reading is the difference between the monetary policy shocks in the US and in the euro area.[5] While the movements in both regions are in the expected direction, the exercise identifies different sensitivities and magnitudes between the two regions. In the euro area, equities are relatively less sensitive, generally speaking, to monetary policy shocks. This may reflect the greater weight of the financial sector in European stock market indices (a sector which tends to benefit from higher interest rates, unlike the rest). Another similar observation is the low sensitivity of inflation expectations to monetary shocks identified by the model in the US – a result consistent with the academic literature.[6]

5. Technically, shocks in one region and another are not comparable, at least quantitatively, as they have different weights on different (and also non-comparable) assets.
6. R.S. Gürkaynak, B. Sack and J.H. Wright (2010). «The TIPS yield curve and inflation compensation». American Economic Journal: Macroeconomics, 2(1), 70-92.

Sessions dominated by each driver

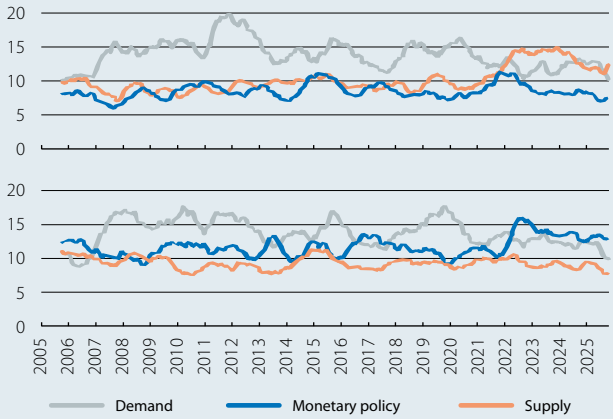
(%)

		Demand	Supply	Monetary policy
Financial crisis (01/01/2007-31/12/2009)	Euro area	41	13	8
	US	39	15	17
Sovereign debt crisis (01/01/2010-31/12/2012)	Euro area	47	13	13
	US	44	10	21
COVID crisis (01/01/2020-31/12/2020)	Euro area	45	14	8
	US	40	10	16
Ukraine War (01/01/2022-31/12/2022)	Euro area	23	33	20
	US	26	13	33
Iran War (01/03/2026-24/04/2026)	Euro area	3	65	8
	US	15	15	38
Total sample	**Euro area**	**36**	**20**	**12**
	US	**33**	**13**	**25**

Note: *The percentages do not add up to 100% because there are sessions dominated by other less important components that we do not consider.*
Source: *CaixaBank Research, based on data from Bloomberg.*

Importance of the drivers in the euro area (above) and in the US (below) over time

(%)



Note: *The lines correspond to the moving averages of the importance of each driver in the last 200 sessions.*
Source: *CaixaBank Research, based on data from Bloomberg.*

Secondly, the analysis makes it possible to calibrate the sensitivity of each asset class to different types of shock. For example, equities show greater sensitivity in demand shocks than in supply shocks. In the case of fixed-income securities, sensitivity varies by region: in the euro area, it shows a similar magnitude in response to supply and demand shocks, whereas in the US it is greater in response to demand shocks.

Finally, it is difficult to decouple the movement of commodities from that of other assets using only the three drivers described. If we expand the number

of drivers analysed, we obtain components with less aggregate explanatory power but which offer greater precision in explaining specific co-movements between assets. This allows us to observe how fluctuations in gold prices are heavily influenced by drivers that were of limited aggregate importance in the past, but which have recently surged.[7]

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Manuel Carrera Moreno

7. In technical terms, the PCA only identifies the seventh component as being a significant driver of gold prices, whereas until mid-2024 it had limited explanatory power. However, in 2026 there have been weeks when this component has been the one with the greatest aggregate importance.

Interest rates (%)

	30-April	31-March	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Euro area					
ECB Refi	2.15	2.15	0	0	–25
3-month Euribor	2.20	2.08	12	17	2
1-year Euribor	2.85	2.87	–2	61	77
1-year government bonds (Germany)	2.50	2.51	0	49	73
2-year government bonds (Germany)	2.64	2.62	3	52	91
10-year government bonds (Germany)	3.04	3.00	3	18	54
10-year government bonds (Spain)	3.50	3.51	–1	21	34
10-year government bonds (Portugal)	3.44	3.45	–1	29	39
US					
Fed funds (lower limit)	3.50	3.50	0	0	–75
3-month SOFR	3.66	3.68	–2	1	–61
1-year government bonds	3.71	3.65	5	24	–19
2-year government bonds	3.87	3.79	8	40	22
10-year government bonds	4.37	4.32	5	20	20

Spreads corporate bonds (bps)

	30-April	31-March	Monthly change (bp)	Year-to-date (bp)	Year-on-year change (bp)
Itraxx Corporate	60	72	–12	9.0	–7.0
Itraxx Financials Senior	63	78	–15	8.2	–8.7
Itraxx Subordinated Financials	103	134	–31	10.0	–21.5

Exchange rates

	30-April	31-March	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
EUR/USD (dollars per euro)	1.173	1.155	1.5	–0.1	3.0
EUR/JPY (yen per euro)	183.700	183.380	0.2	–0.2	13.3
EUR/GBP (pounds per euro)	0.862	0.873	–1.3	–1.1	1.6
USD/JPY (yen per dollar)	156.590	158.720	–1.3	–0.1	10.0

Commodities

	30-April	31-March	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
Bloomberg Commodity Index	140.5	135.2	3.9	28.1	37.2
Brent ($/barrel)	114.0	118.4	–3.7	87.4	77.4
Gold ($/ounce)	4,617.9	4,668.1	–1.1	6.9	39.2

Equity

	30-April	31-March	Monthly change (%)	Year-to-date (%)	Year-on-year change (%)
S&P 500 (USA)	7,209.0	6,528.5	10.4	5.3	29.6
Eurostoxx 50 (euro area)	5,881.5	5,569.7	5.6	1.6	13.9
Ibex 35 (Spain)	17,781.0	17,049.6	4.3	2.7	33.0
PSI 20 (Portugal)	9,345.0	9,131.6	2.3	13.1	34.1
Nikkei 225 (Japan)	59,284.9	51,063.7	16.1	17.8	64.5
MSCI Emerging	1,600.2	1,397.2	14.5	13.9	44.7

Geopolitics prevails over international economic data

Attention in the past month has refocused on the Middle East. As of the close of this report, military and economic pressure continues around the Strait of Hormuz, a key route for the global supply of oil, gas, and derivative products. The IMF, in its April outlook report, points out that despite the strong start to 2026 globally, there is a risk of a severe energy shock if hostilities persist. In its baseline scenario, it assumes a relatively quick normalisation, with an average oil price of around 80 dollars per barrel in 2026, global GDP growth of around 3%, and an increase in inflation of 0.3 pps. It also warns, however, that more adverse or severe scenarios could push the global economy to the brink of stagflation.

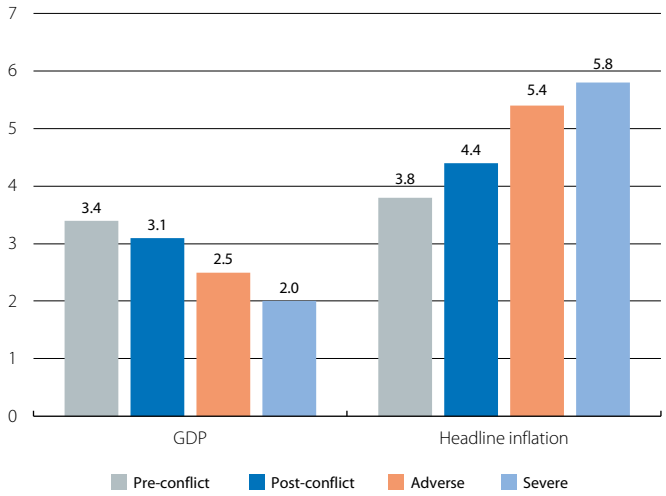
The euro area was already in a rather delicate situation before the conflict. Euro area GDP moderated its growth in Q1 2026 to 0.1% quarter-on-quarter (previously 0.2%), but excluding Ireland it would stand at around 0.2% (previously 0.4%). By country, Germany grew by 0.3%, but important hard data for March (industrial production, orders, exports, etc.), which could affect the final GDP figure, are yet to be published. Italy grew by 0.2% and France stagnated. The euro area has had a modest start to the year, placing the region in a delicate position to face the new energy shock. Moreover, the latest indicators reveal an even weaker start to Q2 2026: in April, the PMIs (which reflect the business climate) fell into recession territory (–2.1 points, to 48.6, with 50 being the threshold) and the Commission's economic sentiment indicator recorded three consecutive months of decline, reaching its lowest level since November 2020 (93.0, with 100 being its historical average). To mitigate the impact of rising energy costs, the main euro area economies have opted for temporary and targeted measures (direct aid to vulnerable households or tax cuts), with a much lower fiscal cost than those deployed during the crisis of 2022-2023.

Germany will see how rising energy costs limit the impact of its infrastructure plan. Moreover, this plan is already struggling to take off: total cumulative federal spending to March has grown by almost 6.0% year-on-year, but infrastructure spending is still 14% lower than a year ago. Optimism about the German economy continues to cool: in April, the ZEW confirms a sharp rise in the proportion of surveyed investors who expect the situation to deteriorate further (almost 35 pps in two months, exceeding 38% of those surveyed), while the Ifo fell to its lowest level since June 2009 (84.4, with 100 being its historical average). Even the government has halved its growth forecast for 2026 to 0.5%.

Italy, which is more exposed to fossil fuels (as they generate almost half of the electricity it consumes), will feel the impact of rising energy prices more acutely in the middle months of the year. France, meanwhile, was already stagnant before the conflict and a substantial recovery is not expected (the consensus among analysts points to GDP growth of 0.1%-0.2% quarter-on-quarter going forward). Furthermore, the capacity of fiscal policy to support both economies is limited by the unfavourable state of their public accounts.

IMF: global GDP and inflation forecasts for 2026

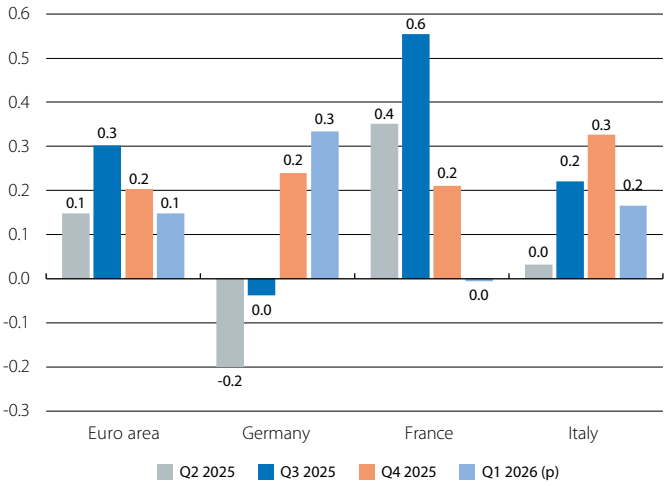
Year-on-year change (%)



Source: *CaixaBank Research, based on data from the IMF (WEO, April 2026).*

Euro area: GDP

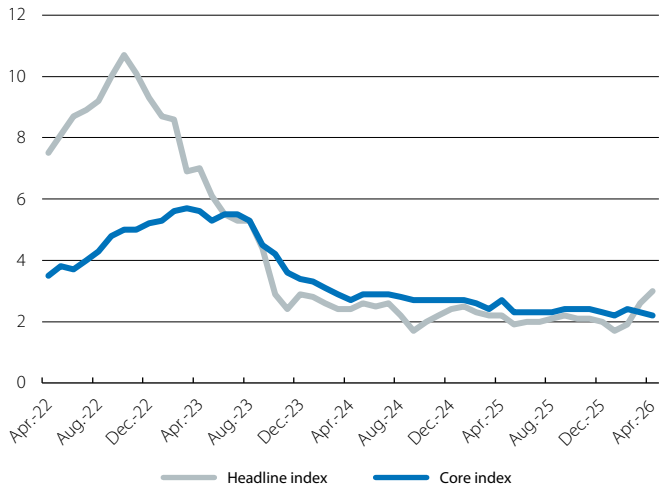
Quarter-on-quarter change (%)



Note: *(p) preliminary data.*
Source: *CaixaBank Research, based on data from Eurostat.*

Euro area: HICP

Year-on-year change (%)



Source: *CaixaBank Research, based on data from Eurostat.*

Euro area headline inflation rose by 0.4 pps in April to 3.0%, driven by energy (10.9% year-on-year in April vs. 5.1% in March), while core inflation fell by 0.1 pp to 2.2%. There is a risk of new inflation spikes: the price components of the PMIs have tightened since the conflict in the Middle East and the inflation expectations captured in the Commission's sentiment indicator are at their highest since the second half of 2022.

The US kicked off the year with good momentum, placing it in a better position to face the current energy shock. The US economy has overcome the impact of the shutdown: after the 0.1% quarter-on-quarter growth recorded in Q4 2025, it grew by 0.5% in Q1 2026. Private consumption continued to expand at a steady pace, while public spending experienced a rebound as its activity normalised (1.1% vs. –1.4%). The main driver was investment in fixed capital (1.5% vs. 0.4%), driven by the ongoing investments associated with AI: investment in computer equipment, software and research and development contributed almost 0.5 pps to quarter-on-quarter GDP growth. This AI boom is also driving imports (5.0% vs. –0.2%), which explains why external demand subtracted 0.3 pps from growth.

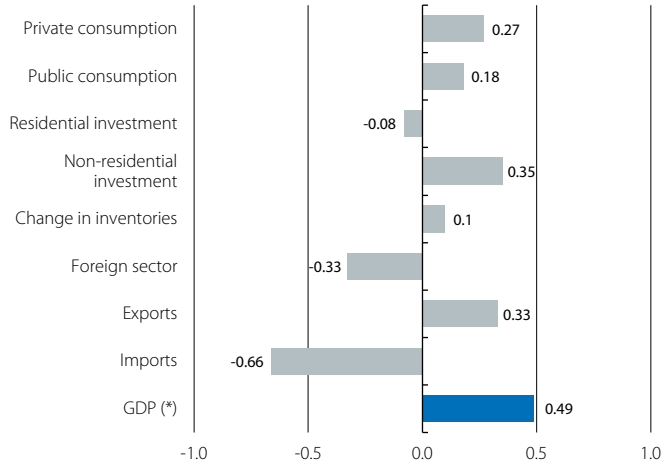
The latest business opinion and climate indicators suggest that this dynamism is set to continue, at least at the start of Q2. In April, the PMIs for both services and manufacturing improved and consolidated at levels compatible with growth rates similar to or slightly above those achieved in Q1. This message is reinforced by the ISM indicators, particularly in the manufacturing sector, which remains at its highest level since August 2022 thanks to the boost from orders.

This optimism in the business sector contrasts with the doubts among consumers: the surge in fuel prices (petrol has risen by more than 33% in the year to April and exceeds 4 dollars per gallon, its highest since August 2022) and rising inflation have dented consumer confidence (the Michigan sentiment index fell in April to its lowest since the summer of 2022). In March, headline inflation rose by 0.8 pps to 3.3%, driven by energy (12.6% vs. 0.4%), while core inflation increased by 0.1 pp to 2.6%. The sharp increase in the price components of the main business climate indicators in March and April points to further rises in inflation in the coming months.

China kicks off the year on a good footing. GDP grew by 1.3% quarter-on-quarter in Q1 2026 (previously 1.2%) and by 5.0% year-on-year, slightly more than expected. Yet domestic demand remains fragile: consumption is slowing down and investment, despite overcoming the setbacks of 2025, remains at historically low levels, weighed down by the real estate sector. Industrial production and exports are showing solid growth, driven by high value-added products such as semiconductors and motor vehicles, which are expected to continue benefiting from the investment boom linked to AI. The positive performance of the main business climate indicators in April suggests that this economic momentum is being maintained at the start of Q2. In this context, inflation remains under control, thanks to a low starting point and measures taken to counteract the rising cost of energy: in March, the headline rate fell by 0.3 pps to 1.0%, and the core rate by 0.7 pps to 1.1%.

US: GDP and its components in Q1 2026

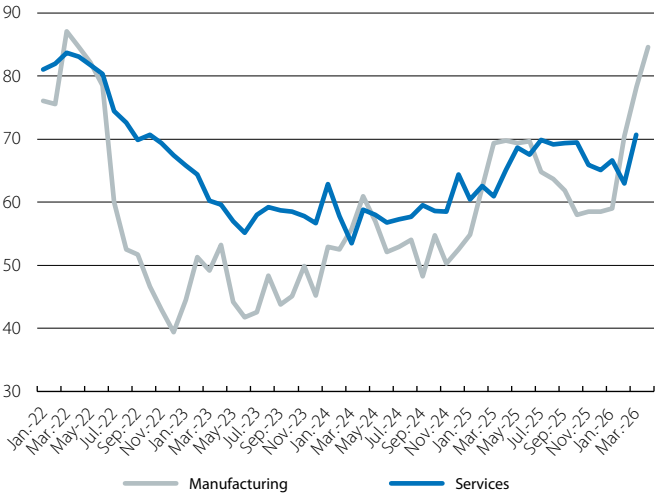
Contribution to quarter-on-quarter growth (pps)



Note: ** Quarter-on-quarter change.*
Source: *CaixaBank Research, based on data from the Bureau of Economic Analysis.*

US: ISM

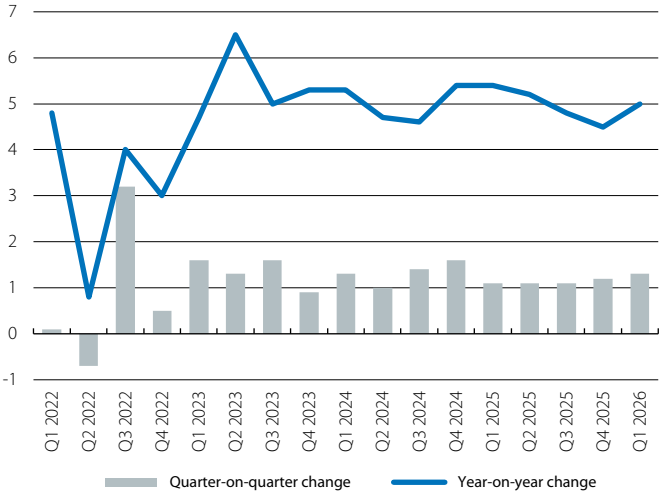
Index (>50 increase; <50 decrease)



Source: *CaixaBank Research, based on data from ISM.*

China: GDP

Change (%)



Source: *CaixaBank Research, based on data from the National Bureau of Statistics of China.*

Shadows (and some light) in Europe's industrial decline

The Industrial Accelerator Act, presented by the European Commission at the beginning of March, outlines its response to the EU's weakening industrial base. It is structured around a set of quantitative objectives: a general one, to raise the sector's share of the economy to 20% of GDP by 2035 (14% in 2025), and several specific ones, aimed at boosting productive capacity and reducing strategic dependencies in critical segments. In pursuit of this latter goal, it includes minimum European content requirements and maximum thresholds for third countries in terms of foreign direct investment and public procurement. This approach risks import substitution leading to costlier inputs and a further erosion of competitiveness, without addressing structural deficiencies in investment, scale, and positioning in value chains for the dual green and digital transition.[1] The shocks accumulated since 2020 – COVID-19, the war in Ukraine, energy and trade tensions – have intensified the loss of European industrial dynamism, but they do not fully explain it. In this context, the solution does not lie in setting numerical thresholds, but in creating the financial, legal and market conditions necessary to reverse the trends that have led to the decline of European industry.[2]

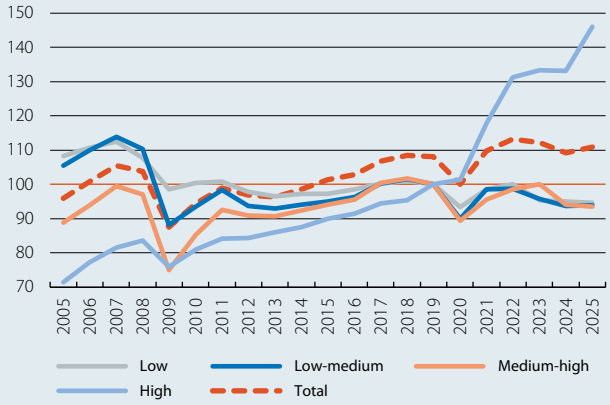
Widespread structural weakness despite technological momentum

Since the global financial crisis, European industry has shown weakness and a high exposure to successive shocks. In 2025, production volumes were just 5% above 2007 levels, resulting from an average annual growth rate below 0.3% (see first chart). This general pattern is found across the sector, although different dynamics are observed depending on the industrial activity. The poorest performance is found in manufacturing with a low or low-medium technological content, where output has recorded a cumulative decline of between 15% and 20%. Given the greater importance of production costs as a competitive element in most of these industries (clothing, footwear and furniture, among others), their weakness points to a structural adjustment driven by intensified competition from Asia, led by China since its entry into the WTO in 2001. In other cases, such as metallurgy, the loss of international competitiveness has been exacerbated by state aid, a more lenient legal framework and better access to raw materials in competitor countries.[3]

1. See J. Zettelmeyer (2025). «Draghi on a shoestring: the European Commission's Competitiveness Compass».
2. See the Focus «How far has the EU progressed on the Competitiveness Compass?» in the MR04/2026.
3. OECD (2025). «Steel Outlook 2025».

EU: manufacturing output by technological content

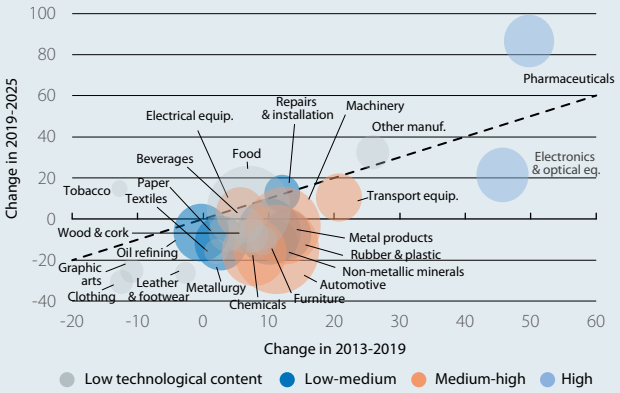
Volume (index 100 = 2019)



Source: *CaixaBank Research, based on data from Eurostat.*

EU: manufacturing output by activity

Volume (% change)



Note: *The area of the bubbles is proportional to output value in 2019.*
Source: *CaixaBank Research, based on data from Eurostat.*

Even more concerning is the prolonged stagnation of medium-high technology manufacturing (chemicals, machinery and transport equipment, including the automotive sector), which represent the core of traditional European industry and account for a significant portion of the sector's employment. In contrast, high-tech manufacturing (pharmaceuticals, electronics and aeronautics) has performed much better, with average annual production growth exceeding 3% over the last 20 years. As a result, its share of total industrial output has doubled (reaching 17% in 2025).

This contrasting picture by technological content becomes even more patent when analysing the pattern by industrial activity: the advances of a few have failed to galvanise a broader improvement in manufacturing as a whole (see second chart). In most cases, even before COVID-19 (2013-2019), growth was insufficient to recover the losses accumulated in previous crises, and since 2020, sharper declines or incomplete recoveries have prevailed.

For example, sectors such as furniture, rubber and plastic, non-metallic minerals (mainly construction materials), chemical products and the automotive sector have shifted from growing at average rates of 1.5%-2% annually before the pandemic to declining by around 2% up until 2025. In all cases, they remain below the production levels of 10 years ago (in some cases, 20 years ago).

The automotive and high-tech sectors: two distinct geographical patterns

The automotive industry – one of the worst-performing industrial sectors in recent years – reveals one of the clearest territorial divides within European industry. The overall decline in production between 2019 and 2025 has not been uniform: several Eastern European countries show relatively more favourable patterns, while the large industrial economies such as Germany and Italy have recorded sharper declines (see third chart). This pattern reflects a highly pronounced production specialisation in countries such as Poland and the Czech Republic, as well as their deep integration into Central European value chains, where the automotive industry continues to play a significant role. The core countries, in contrast, have been more sharply affected by the loss of competitiveness and the adjustments resulting from the technological transition and regulatory changes associated with decarbonisation.[4]

Unlike the automotive sector, the pattern in high-tech manufacturing shows less geographical divergence. Production growth has been relatively widespread across different countries, consistent with its strong aggregate performance over the past 20 years (see fourth chart). Nevertheless, the intensity of this growth is uneven, with the strongest performance found in segments such as pharmaceuticals, which has driven economies like Ireland and Denmark.[5] In contrast, leading EU countries like Germany and France have recorded more modest progress, and electronic equipment manufacturing has experienced a widespread loss of momentum, precisely in the midst of the AI boom.[6]

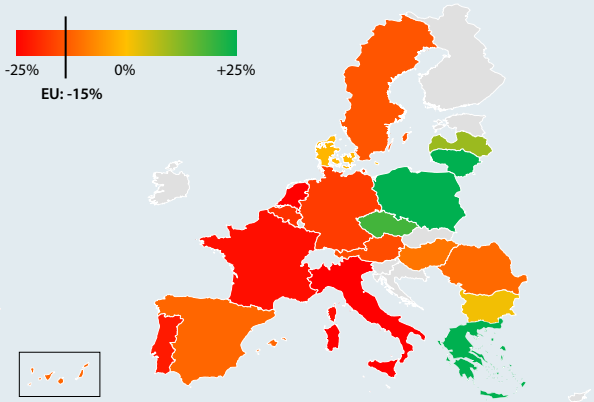
External dependencies and limits of European industrial integration

The breakdown of the EU's final demand by origin of manufacturing value added, based on the OECD's TiVA (Trade in Value-Added) database, provides a snapshot of European industry's external dependencies. Although this information is published with a certain time lag (the

4. See McKinsey & Company (2025). «A new 'ERA': an action plan for the European automotive industry».
5. See the Focus «Characterisation of the business cycle in the EU: neither widespread, nor robust» in the MR01/2026.
6. See the article «Differentiated strategies for governing AI: towards cooperation or conflict?» in the Dossier of this same *Monthly Report*.

Automotive sector output

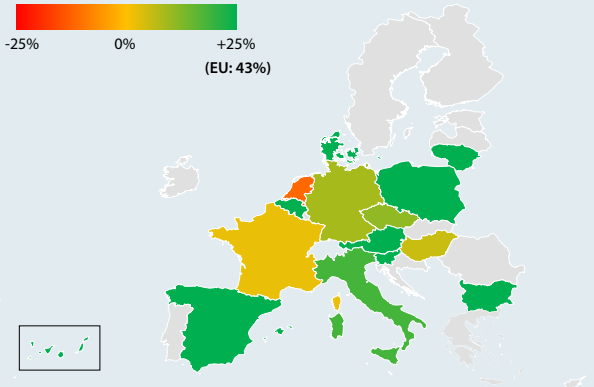
Volume (% change in 2019-2025)



Note: *Confidential data not available for the countries in grey.*
Source: *CaixaBank Research, based on data from Eurostat.*

High-tech content manufacturing output

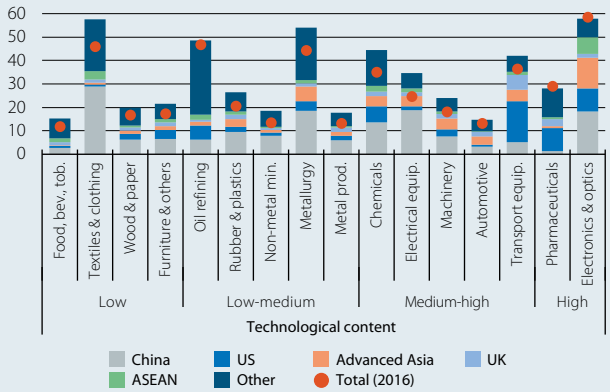
Volume (% change in 2019-2025)



Notes: *Includes the manufacture of pharmaceutical products, the manufacture of computer, electronic and optical products, and aerospace and space construction and its machinery. Confidential data not available for the countries in grey.*
Source: *CaixaBank Research, based on data from Eurostat.*

EU: manufacturing value added embodied in final demand (2022)

(by country/region of origin outside the EU, as a %)



Notes: *Manufacturing value added from outside the EU as a percentage of the total manufacturing value added embodied in the total final demand of the EU. Advanced Asia includes Japan, Korea and Taiwan.*
Source: *CaixaBank Research, based on data from Eurostat.*

most recent available year is 2022), the patterns that emerge are clearly structural.[7] The comparison with 2016 – the midpoint of the 2013-2019 period – confirms that most manufacturing activities, including those with a high technological content, already incorporated a very high share of value added from outside the EU, with China as the main source. Moreover, in many cases these percentages had increased by 2022 (see fifth chart). This dependency is observed in all the major EU economies (especially in production chains centred in Germany) and is more intense in highly globalised industries. For instance, electronics and optical equipment, as well as textiles and clothing, have a particularly high external dependency: in both segments, around 60% of the value added in the EU's final demand is contributed by non-EU suppliers (with China contributing approximately 20 and 30 points, respectively).

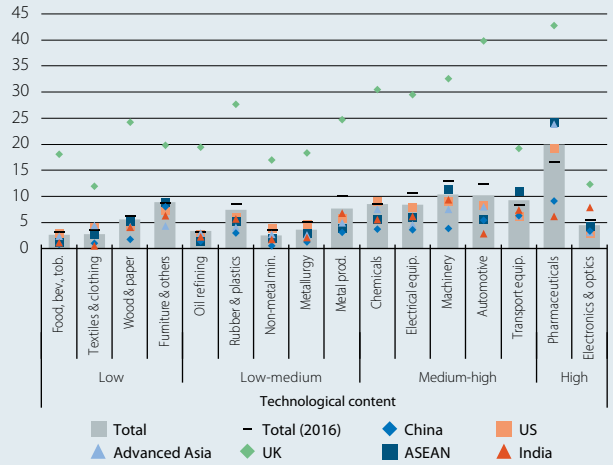
The alternative reading, based on the destination of European manufacturing value added, reinforces this asymmetry. The EU's integration into global value chains is largely focused on advanced markets, particularly the US in absolute terms and the UK in relative terms, while its presence in Asia's final manufacturing demand is comparatively limited (see sixth chart). For example, of the total industrial value added embodied in China's final demand in 2022, the EU accounted for less than 3%, highlighting the challenge of gaining a foothold in Asian markets. Overall, Europe's share of manufacturing value added embodied in the final demand of the rest of the world stood below 7% in 2022, almost 1 percentage point less than in 2016.

The diagnosis that emerges is clear and unflattering. European industry faces a structural weakness that cannot be explained solely by recent shocks nor corrected through aggregate quantitative targets. There are technological capabilities and niches of strength, but their reach is limited and their capacity to benefit other manufacturing activities is insufficient. At the same time, asymmetric international integration has increased external dependencies in key sectors, amplifying vulnerabilities in an increasingly fragmented geopolitical environment. The reform agenda kick-started with the Competitiveness Compass, which encompasses the Industrial Acceleration Act, will only be effective if it directly addresses the bottlenecks in investment, scale, and the internal market that have been hindering European industry for years. Otherwise, we risk pursuing a strategy that, while well-intentioned, is incapable of reversing deeply-entrenched trends.

David Martínez Turégano

7. See R. Marschinski and D. Martínez-Turégano (2020) «The EU's shrinking share in global manufacturing: a value chain decomposition analysis», National Institute Economic Review, nº 252.

EU: manufacturing value added (2022)
(by country/region of final demand, as a %)



Notes: *Manufacturing value added of the EU as a percentage of the total manufacturing value added embodied in the final demand of each country/origin. The total excludes final demand in the EU.*
Source: *CaixaBank Research, based on data from Eurostat.*

Year-on-year (%) change, unless otherwise specified

UNITED STATES

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Activity									
Real GDP	2.8	2.1	2.1	2.3	2.0	2.7	–	–	–
Retail sales (excluding cars and petrol)	3.4	4.5	4.9	4.6	3.9	4.4	4.4	4.2	...
Consumer confidence *(value)*	104.5	96.1	93.1	97.4	94.2	90.7	91.0	92.2	92.8
Industrial production	–0.7	1.1	0.5	1.7	1.6	1.2	1.2	0.7	...
Manufacturing activity index (ISM) *(value)*	48.2	48.9	48.8	48.7	48.2	52.6	52.4	52.7	52.7
Housing starts *(thousands)*	1,371	1,356	1,354	1,346	1,323	1,419	1,356	1,502	...
Case-Shiller home price index *(value)*	330	339	338	338	341	...	343	...	...
Unemployment rate *(% lab. force)*	4.0	4.3	4.2	4.3	4.5	4.3	4.4	4.3	...
Employment-population ratio *(% pop. > 16 years)*	60.1	59.8	59.8	59.6	59.7	59.3	59.3	59.2	...
Trade balance [1] *(% GDP)*	–2.8	–3.4	–3.6	–3.4	–3.0	–2.5	–2.5	–2.2	...
Prices									
Headline inflation	2.9	2.6	2.4	2.9	2.7	2.7	2.4	3.3	...
Core inflation	3.4	2.9	2.8	3.1	2.6	2.5	2.5	2.6	...

JAPAN

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Activity									
Real GDP	–0.2	1.2	2.1	0.7	0.4	...	–	–	–
Consumer confidence *(value)*	37.2	34.7	33.2	34.8	36.7	36.9	39.7	33.3	32.2
Industrial production	–3.0	0.1	0.1	–1.1	–1.3	1.1	0.4	0.5	...
Business activity index (Tankan) *(value)*	12.8	13.5	13.0	14.0	15.0	17.0	–	–	–
Unemployment rate *(% lab. force)*	2.5	2.5	2.5	2.5	2.6	2.7	2.6	2.7	...
Trade balance [1] *(% GDP)*	–1.0	–0.6	–0.7	–0.5	–0.4	...	–0.3	...	...
Prices									
Headline inflation	2.7	3.2	3.4	2.9	2.7	1.4	1.3	1.4	...
Core inflation	2.4	3.0	3.2	3.2	3.0	2.6	2.6	2.5	...

CHINA

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Activity									
Real GDP	5.0	5.0	5.2	4.8	4.5	5.0	–	–	–
Retail sales	3.3	3.8	4.4	2.4	0.7	2.4	2.8	1.7	...
Industrial production	5.6	5.9	6.2	5.8	5.0	6.0	6.3	5.7	...
PMI manufacturing *(value)*	49.8	49.6	49.4	49.5	49.4	49.6	49.0	50.4	50.3
Foreign sector									
Trade balance [1,2]	997	1,191	1,146	1,175	1,191	1,183	1,234	1,183	...
Exports	4.6	5.5	6.0	6.5	3.8	14.5	39.4	2.3	...
Imports	1.0	0.1	–0.8	4.6	3.1	22.7	13.9	27.8	...
Prices									
Headline inflation	0.2	0.1	0.0	–0.2	0.6	0.8	1.3	1.0	...
Official interest rate [3]	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Renminbi per dollar	7.2	7.2	7.2	7.2	7.1	6.9	6.9	6.9	6.8

Notes: *1. Cumulative figure over last 12 months. 2. Billion dollars. 3. End of period.*
Source: *CaixaBank Research, based on data from the Department of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, Standard & Poor's, ISM, National Bureau of Statistics of Japan, Bank of Japan, National Bureau of Statistics of China and Refinitiv.*

EURO AREA

Activity and employment indicators

Values, unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Retail sales *(year-on-year change)*	1.2	2.4	3.1	2.0	2.2	...	1.7	...	...
Industrial production *(year-on-year change)*	–2.9	1.5	1.2	1.5	1.9	...	–0.6	...	...
Consumer confidence	–12.6	–13.4	–14.1	–13.6	–12.9	–13.8	–12.4	–16.4	–20.6
Economic sentiment	95.9	95.9	95.0	96.0	97.1	97.6	97.8	96.2	93.0
Manufacturing PMI	45.9	49.1	49.3	50.1	49.5	50.7	50.8	51.6	52.2
Services PMI	51.5	51.3	50.1	50.9	53.0	51.2	51.9	50.2	47.6
Labour market									
Employment (people) *(year-on-year change)*	1.0	0.7	0.7	0.6	0.7	...	–	–	–
Unemployment rate *(% labour force)*	6.3	6.3	6.3	6.3	6.3	6.2	6.3	6.2	...
Germany *(% labour force)*	3.4	3.8	3.7	3.8	3.9	4.0	4.0	4.0	...
France *(% labour force)*	7.4	7.7	7.6	7.7	7.9	7.7	7.7	7.7	...
Italy *(% labour force)*	6.6	6.1	6.3	6.0	5.7	5.3	5.4	5.2	...
Real GDP *(year-on-year change)*	0.9	1.5	1.6	1.4	1.2	0.8	–	–	–
Germany *(year-on-year change)*	–0.5	0.3	0.4	0.3	0.4	0.3	–	–	–
France *(year-on-year change)*	1.1	0.9	0.8	1.0	1.3	1.1	–	–	–
Italy *(year-on-year change)*	0.6	0.7	0.4	0.7	0.9	0.7	–	–	–

Prices

Year-on-year change (%), unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
General	2.4	2.1	2.0	2.1	2.1	2.0	1.9	2.6	3.0
Core	2.8	2.4	2.4	2.3	2.4	2.3	2.4	2.3	2.2

Foreign sector

Cumulative balance over the last 12 months as % of GDP of the last 4 quarters, unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Current balance	3.4	2.2	2.7	2.4	2.2	...	2.4	...	...
Germany	5.9	4.5	5.0	4.7	4.5	...	4.6	...	...
France	0.1	–0.3	–0.2	–0.5	–0.3	...	–0.3	...	...
Italy	1.1	1.1	0.9	1.1	1.1	...	1.3	...	...
Nominal effective exchange rate[1] *(value)*	94.2	96.1	96.2	97.9	97.5	97.2	97.3	96.8	97.4

Credit and deposits of non-financial sectors

Year-on-year change (%), unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Private sector financing									
Credit to non-financial firms[2]	0.8	2.7	2.6	2.9	3.0	3.0	3.0	3.2	...
Credit to households[2,3]	0.5	2.2	2.1	2.5	2.9	3.0	3.0	3.0	...
Interest rate on loans to non-financial firms[4] *(%)*	4.9	3.4	3.4	3.2	3.3	3.3	3.2	3.4	...
Interest rate on loans to households for house purchases[5] *(%)*	4.6	3.7	3.7	3.6	3.5	3.5	3.5	3.5	...
Deposits									
On demand deposits	–3.9	5.0	5.3	5.5	5.4	5.4	5.3	5.0	...
Other short-term deposits	12.4	–0.1	–0.1	–1.5	–1.0	–0.1	0.2	–0.1	...
Marketable instruments	20.0	7.7	11.0	4.4	0.9	1.5	–1.3	4.5	...
Interest rate on deposits up to 1 year from households *(%)*	3.0	1.9	1.9	1.7	1.8	1.8	1.8	1.8	...

Notes: *1. Weighted by flow of foreign trade. Higher figures indicate the currency has appreciated. 2. Data adjusted for sales and securitization. 3. Including NPISH. 4. Loans of more than one million euros with a floating rate and an initial rate fixation period of up to one year. 5. Loans with a floating rate and an initial rate fixation period of up to one year.*

Source: *CaixaBank Research, based on data from the Eurostat, European Central Bank, European Commission, national statistics institutes and Markit.*

The Spanish economy remains resilient in an uncertain environment

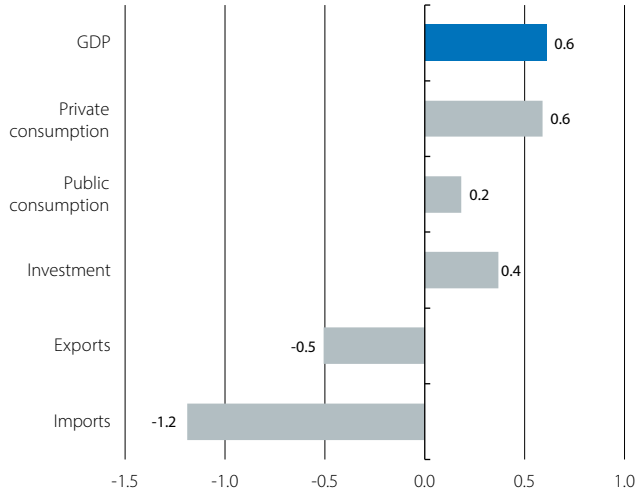
The latest indicators depict an economy that remains resilient amid the entrenchment of the conflict in the Persian Gulf. Among the various channels through which this conflict can affect the economy, the most visible impact so far is in inflation, through the rise in energy costs: the rise in crude oil prices has been partially passed on to fuel prices, especially diesel, which is moderately driving up inflation. This, in turn, could dampen a previously dynamic consumption if tensions were to persist. Nevertheless, the start of 2026 is proving somewhat more favourable than expected and the initial indicators for Q2, with their nuances, suggest that economic activity growth remains buoyant.

GDP beats expectations in Q1 and confirms the resilience of domestic demand. GDP grew by 0.6% quarter-on-quarter in Q1 2026, 0.2 pps less than in Q4 2025 but slightly above the 0.5% quarter-on-quarter growth rate we had anticipated. This expansion was supported by the strength of domestic demand, which contributed 0.4 pps to quarter-on-quarter growth, driven mainly by private consumption. Investment moderated its growth in quarter-on-quarter terms to 0.4%, but the strength of recent quarters has kept the year-on-year growth rate above 5%. Foreign demand also made a positive contribution of 0.2 pps, although this was due to imports falling more than exports. In both cases, it was the goods segment that caused the setbacks, which is not surprising given the environment of increased trade protectionism and the tensions in the Persian Gulf. In contrast, services exports maintained a good tone.

A moderate growth rate is maintained at the start of Q2. We still have few indicators for Q2. With data up to April, we currently note that employment continues to grow at a steady pace, while the crisis in Iran is beginning to impact sentiment indicators. In April, the PMI for the services sector plummeted from 53.3 points to 47.9 points, affected by the climate of lower confidence, and entered the territory indicating contraction in the sector (below 50 points) for the first time since August 2023. In industry, in contrast, the manufacturing PMI registered a sharp rebound to 51.7 points, the highest level since July 2025. This improvement was driven by an increase in customer orders to secure inventories, and returned the index to expansionary territory after several months in the contractionary zone. The CaixaBank Research Consumption Monitor experienced significant fluctuations throughout the month, with a drop of nearly 2.5% in the first fortnight, followed by a sharp rebound in the second, of around 7%. Beyond the fluctuations generated by seasonal effects, such as Easter, the composition of spending suggests that household confidence remains high. Domestic consumption is being driven by spending on discretionary items such as fashion, furniture and decoration, as well as leisure and dining. Thus, the indicators overall suggest that growth could moderate slightly this quarter compared to the previous one, but that the economy will continue to grow.

Spain: GDP and its components

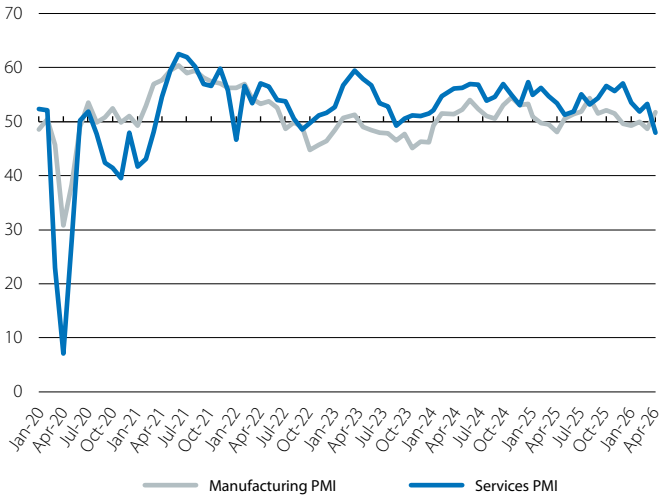
Quarter-on-quarter change in Q1 2026 (%)



Source: *CaixaBank Research, based on data from the National Statistics Institute (INE).*

Spain: PMI

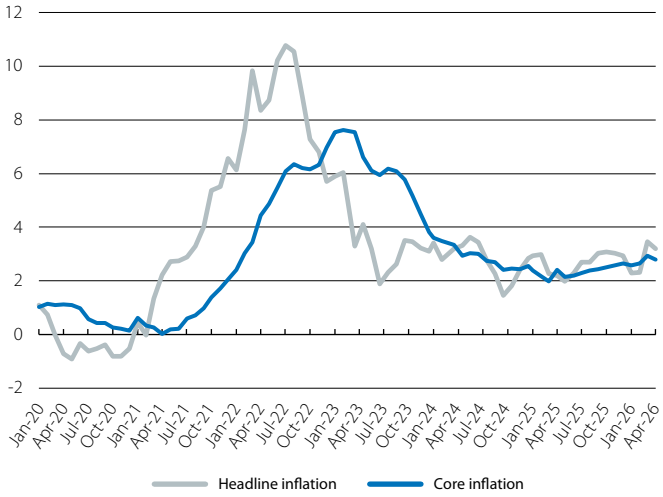
Level



Source: *CaixaBank Research, based on data from S&P Global PMI.*

Spain: CPI

Year-on-year change (%)



Source: *CaixaBank Research, based on data from the National Statistics Institute (INE).*

Inflation eases in April, but the energy shock persists. Headline inflation fell 0.2 pps in April to 3.2%, while core inflation was down 0.1 pp to 2.8%. The moderation of headline inflation is mainly explained by the decline in electricity prices due to tax cuts. Fuels continued to exert upward pressure, especially diesel, despite the measures adopted. On the other hand, the non-energy components of the CPI have remained contained. This suggests that, for now, the energy shock is not noticeably being transmitted to other prices via indirect effects. With the information available from March and April, and considering the recent evolution of energy prices and the measures adopted, all the indicators suggest that inflation will be above 3% for the year as a whole.

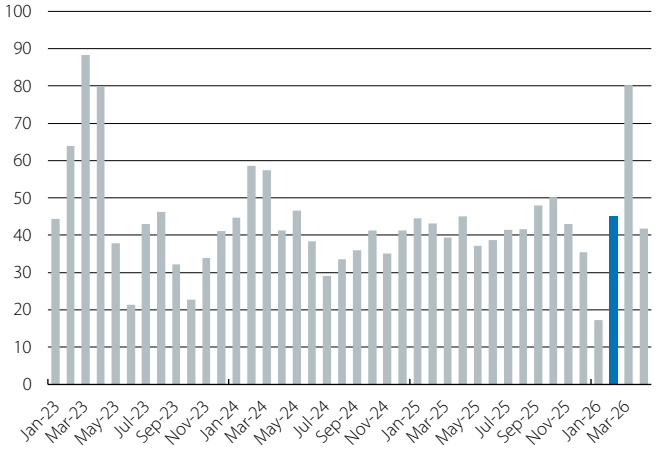
Employment continues to record rapid growth. The labour market continues to show a healthy performance. In April, Social Security affiliation increased by 1.0% month-on-month, a figure in line with usual trends for this month of the year. In seasonally adjusted terms, the growth rate of employment remained similar to those observed at the end of 2025 and during Q1, indicating continuity in the pace of job creation. In fact, the available data suggest a somewhat more dynamic start to 2026 than anticipated: in the first four months of the year, the number of affiliates has increased by an average of some 46,000 people per month (seasonally adjusted). If this rate were maintained, it would result in a year-end total of around 550,000 new registered workers, exceeding the forecast of 475,000, excluding the impact of the exceptional regularisation of undocumented workers.

The Q1 2026 LFS also reflects a significant job creation rate. After a particularly dynamic Q4 2025, employment increased by 0.4% quarter-on-quarter, just 0.2 pps below the average growth rate of recent years. The unemployment rate, meanwhile, rose to 10.8% in a quarter in which it typically increases, although it was still 0.6 pps below the figure of a year ago. Taken together, both sources point to a labour market that continues to create jobs at a solid – albeit somewhat restrained – rate that is consistent with the moderation of economic activity.

Tourism growth remains solid at the start of the year. While in other areas the risks to economic activity are skewed to the downside, the outlook for the tourism sector is more ambiguous. In March, the month when the war began, international tourist arrivals increased by 3.3% year-on-year and tourism spending rose by 5.4%, surpassing the February figures. This indicates that, for now, the conflict in the Persian Gulf is not hindering the sector's progress. Q1 2026 thus ended with 17.5 million international tourists (+2.5% year-on-year) and foreign tourism expenditure exceeding 25 billion euros (+6.3%). Although these rates are lower than the exceptional records of 2025, the reduction in tourism from Asia due to adjustments to air routes passing through the Gulf is currently being more than offset by a redirection of European tourism towards destinations perceived as safe, such as Spain. However, if the conflict becomes entrenched or escalates, then the sector could also end up being negatively impacted.

*Spain: workers registered with Social Security**

Month-on-month change (thousands of people)



Note: ** Seasonally adjusted series.*
Source: *CaixaBank Research, based on data from the Ministry of Inclusion, Social Security and Migration.*

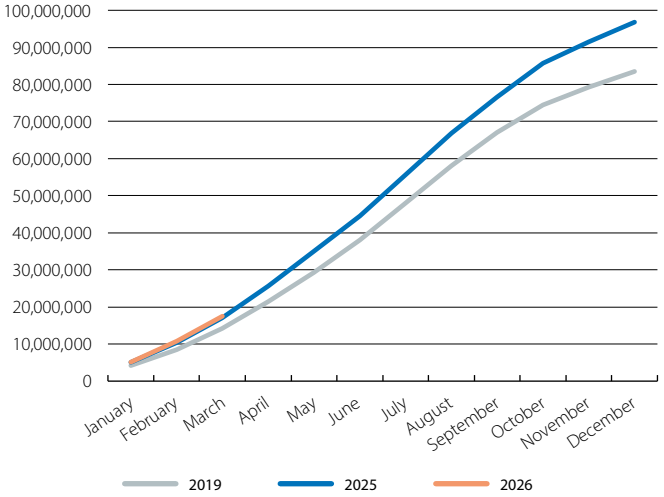
Spain: unemployment rate

(%)

Source: *CaixaBank Research, based on data from the National Statistics Institute (INE).*

Spain: number of international tourists

People (cumulative)



Source: *CaixaBank Research, based on data from the National Statistics Institute (INE).*

Household savings, income and finances in Spain: how did they fare in 2025 and what can we expect for 2026?

The household savings rate, measured as gross savings as a percentage of gross disposable income (GDI), decreased moderately in 2025, from 12.7% to 12.0%, as a result of the growth of consumption expenditure outpacing that of disposable income. In aggregate terms, gross savings amounted to 128 billion euros in 2025 – a notable figure (7.6% of GDP), albeit 700 million less than the previous year. This reduction is consistent with the context of lower interest rates and stabilisation of inflation, factors that can act as a spur to boost consumption. Despite the decline, the savings rate remains well above the historical average of 8.6% observed between 2000 and 2019, suggesting that households retain a significant financial buffer. In this article, we analyse the factors behind this pattern and the outlook for 2026, in a context marked by the conflict in the Middle East, which could lead to higher inflation and potential interest rate hikes.

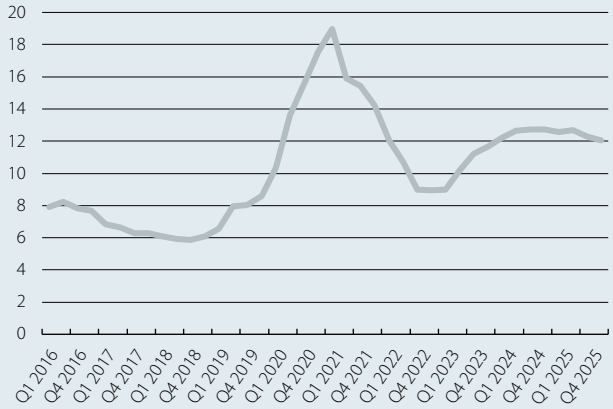
2025 recap: a healthier financial position

The moderate decline in the savings rate in 2025 is primarily due to a 5.3% year-on-year growth in nominal GDI. This is a solid growth rate, albeit lower than that observed in 2024 (7.5%) and clearly surpassed by the increase in final household consumption expenditure, which was 6.2%. The growth of GDI was driven by the strong performance of the labour market: total wage-earner remuneration increased by 7.2% year-on-year, reflecting both the rise in the number of employees in terms of full-time equivalent jobs (+3.3%) and the growth in remuneration per worker (+3.9%). The gross operating surplus (income from self-employed workers, imputed rents for owner-occupiers, etc.) also contributed positively, growing by 5.1%, as did some components of net property income, such as dividends and other investment income, which recorded strong growth. This vigour was partially offset by the opposing contribution of the public sector: direct taxes paid by households grew by 10.5% in 2025, especially in the second half of the year, more than offsetting the 6.2% increase in social benefits. This increase in taxes is explained by the strength of employment, the good performance of tax revenues on capital and labour, and the lack of updates to personal income tax brackets. As a result, primary gross income (before taxes or transfers) grew by 6.0% in 2025, outpacing the growth of final GDI.

In 2025, GDI grew above the rate of average annual inflation (2.7%) and the growth in the number of households (1.3% according to the LFS), which allowed for a recovery in purchasing power. In this context, real household income has grown by 4.5% since before the pandemic, highlighting that households have continued to gain purchasing power in real terms.

Spain: savings rate

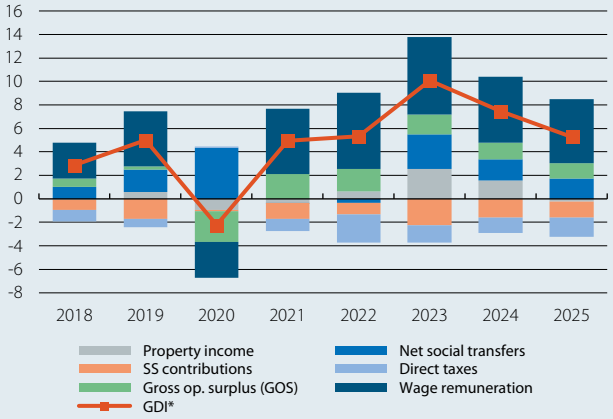
(% of gross disposable income)



Note: *Four-quarter cumulative data.*
Source: *CaixaBank Research, based on data from the National Statistics Institute (INE).*

Spain: household disposable income

Annual change (%) and contributions



Note: ** Gross disposable income.*
Source: *CaixaBank Research, based on data from the National Statistics Institute (INE).*

The strong financial position of households is reflected not only in the high savings rate but also in their financial accounts. In this regard, households' financial wealth continued to increase in 2025: their financial assets amounted to 3.4 trillion euros at the end of the year, versus 3.1 trillion at the end of 2024. This increase of 292 billion euros is broken down into a net acquisition of financial assets amounting to 95 billion, higher than the 21.5-billion average in the period 2015-2019, when interest rates were very low, and a revaluation effect of 194 billion. When breaking down the net acquisition of assets, we note that households invested 42 billion euros in equities and investment funds, just under 9.6 billion less than in deposits, while they disposed of debt securities worth 6 billion following the fall in interest rates.

On the other hand, households continued to deleverage in 2025, and by the end of the year their financial liabilities[1] stood at 46.9% of GDP, compared to 47.8% in 2024, the lowest level since the end of 1998. This decline reflects the fact that, in 2025, households took advantage of the interest rate drop to prudently incur debt: net new borrowing amounted to 35 billion euros, representing an increase of 3.8%, which is lower than the nominal GDP growth of 5.8% and the GDI growth of 5.3%.

As a result of the increase in financial assets and the decrease in liabilities as a percentage of GDP, the net financial wealth of households recorded a notable increase of 7.3 points compared to 2024, reaching 156.8% of GDP.

2026 outlook: income dynamism and a savings rate with much greater downward resistance than in the 2022 energy crisis

Looking ahead to the remainder of 2026, GDI is expected to maintain dynamic growth, supported by the strength of the labour market. The data for the 2025 year end, together with the strong labour market data for Q1 2026 and the projected increase in pension spending, which AIReF estimates at 5.1% (broken down into 2.7% for value updates and 2.4 pps due to the substitution effect in favour of higher pensions), suggest that GDI could grow by around 4.5% this year.

The evolution of the savings rate will be influenced by opposing forces. On one hand, the resurgence of inflation associated with the tensions in the Middle East could boost nominal consumption growth if households try to maintain their real consumption level, which could reduce the savings rate. On the other hand, an increase in uncertainty and interest rates could cause households to postpone their consumption and investment decisions and could encourage greater precautionary savings. In 2022, with the energy crisis triggered by the war in Ukraine, we saw a sharp decline in the savings rate. However, in that episode, a rebound in consumption was already occurring following the end of the COVID-19 restrictions and the inflation shock was very concentrated in non-discretionary items of the consumption basket, such as electricity prices. On this occasion, given that there are no substantial increases in electricity bills and fiscal policy is cushioning the impact of rising fuel prices, households have more leeway to adjust their consumption decisions in response to the new shock.

Before the war, we expected the savings rate to decline moderately from 12.0% in 2025 to 11.5% in 2026. Following the outbreak of the conflict, however, there is significant uncertainty over where the savings rate will finally settle. For illustrative purposes only, let us suppose that the savings rate absorbs 50% of the shock on real consumption in 2026 – a prudent assumption if we compare it with the experience of 2022, when it absorbed the entirety of the increase in inflation – and that average inflation this year is 1 pp higher than estimated prior to the war. Under these assumptions, which are consistent with a short-lived conflict and a contained macro impact, the growth of nominal expenditure this year would be around 1 pp above that of GDI, and the savings rate would be around 11% of GDI by the end of 2026, half a point less than forecast before the war. Conversely, if the precautionary savings channel becomes more dominant, then the cushioning effect of the savings rate on consumption would be less or could even lead to increases in the savings rate, as occurred in 2008 and 2009 at the start of the financial crisis. All this will depend on the duration and severity of the conflict, as well as the impact on household expectations.

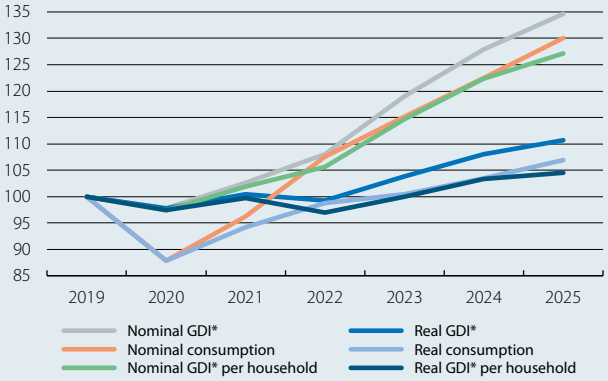
Ultimately, the high savings rate observed at the end of 2025 and the good financial situation of households allow us to face the impact of the war in Iran on consumption from a position of strength, in a context of high global uncertainty.

Sergio Díaz and Javier Garcia-Arenas

1. Financial liabilities include the outstanding balance of bank loans, commercial loans and other amounts payable (accrued loan interest, taxes and social security contributions payable).

Spain: gross disposable income and household consumption

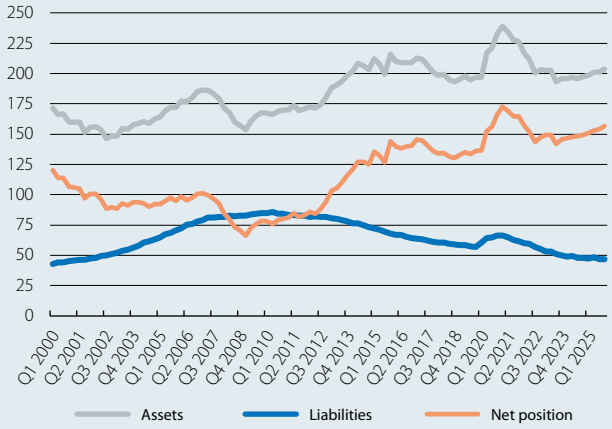
Index (100 = 2019)



Notes: *Seasonally adjusted data. * Gross disposable income.*
Source: *CaixaBank Research, based on data from the National Statistics Institute (INE).*

Spain: households' financial balance sheet

(% of GDP)



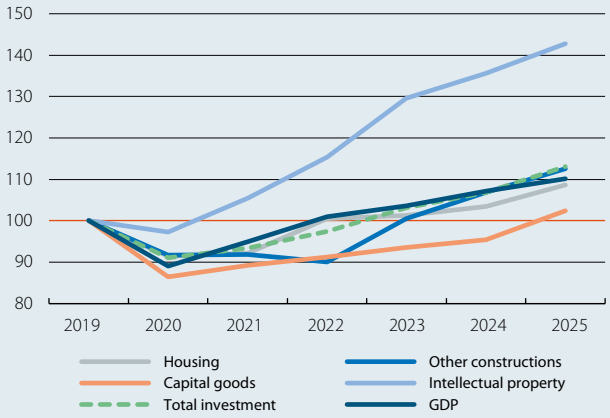
Source: *CaixaBank Research, based on data from the Bank of Spain.*

Investment growth, key to consolidating Spain's economic expansion

Investment is a key component for the long-term growth and competitiveness of any economy, but it is also one of the most procyclical and volatile, with high sensitivity to financing conditions, external shocks or changes in agents' confidence or demand. Following the pandemic, investment in Spain followed a slower recovery than other components of demand. The drivers of growth were public consumption and net exports, while investment did not return to pre-pandemic levels until Q1 2023, a year after GDP, and its relative contribution to growth was significantly reduced: between 2021 and 2025 it accounted for 21.3% of average annual GDP growth, compared to 35% in the previous expansionary cycle (2014-2019). Below, we analyse the factors behind the recent behaviour of investment, comparing the current investment cycle with the previous one (2014-2019) and contrasting the situation in Spain with that of its main euro area partners.

Spain: investment by asset type

Index (100 = 2019)



Note: *Data in real terms.*
Source: *CaixaBank Research, based on data from the National Statistics Institute (INE).*

The cycle prior to the outbreak of the pandemic took place in a relatively calm environment and benefited from financial tailwinds (liquidity and low interest rates), the recovery of economic activity and employment following the 2008-2013 financial crisis, the improvement in corporate financial positions, and a gradual normalisation of the real estate sector. In contrast, the post-pandemic cycle experienced a succession of exogenous shocks that shook the European economic landscape, first with disruptions to global supply chains and later with the energy crisis stemming from the war in Ukraine, with the consequent impact on inflation and the rapid tightening of monetary policy, which reduced the capacity of businesses and households to invest.

Despite the difficulties, the 2025 data hinted at a revival in investment, in line with the recovery in demand and business confidence, and in a context characterised by favourable financial conditions and the boost from NGEU funds. However, the war in the Middle East has triggered a spike in uncertainty and could limit investment.[1] Regarding the NGEU funds, their role has been very significant, supporting both public investment and a part of private investment: a significant proportion of companies acknowledge that they would not have made their investments without this support.[2]

By asset type, investment since 2019 has been widely varied (see first chart). On the one hand, investment in technological and intangible assets (R&D, software, concessions, patents, licenses, etc.) is the segment that has shown the greatest buoyancy, with exceptional growth exceeding 40% since 2019, driven by the digitalisation of businesses and European funds allocated to support the digital transition. This strong growth has allowed investment in this asset class to increase as a proportion of GDP, going from 3.4% in 2019 to 4.0% in 2025. This dynamic, which is applicable across the euro area, is key to enhancing the transformation capacity of the productive sector and accelerating the convergence with countries that are leaders in innovation.

Conversely, investment in capital goods is the component that is lagging the most behind, as it did not recover to pre-pandemic levels until the end of 2024, initially affected by sluggish domestic demand and uncertainty about the economic future. Within this category, clear differences are observed by segment: in contrast to the prolonged weakness in investment in transport equipment – in 2025 it was still 17% below 2019 levels – reflecting past bottlenecks, the technological transition and business caution, investment in other machinery shows a more resilient profile and in 2025 was 12.1% above the 2019 level.

As for investment in construction, its two segments – housing[3] and non-residential – have recovered in line with GDP, the latter driven by public infrastructure. In any case, the construction sector faces certain constraints, such as the rising cost of materials and interest rate hikes.

1. See the Focus «The Spanish economy in 2026», in the MR03/2026.
2. Bank of Spain (2025): «Weak business investment in Spain following the pandemic: an analysis based on the Banco de España Business Activity Survey», Economic Bulletin, 2025/Q1.
3. Although investment in housing has performed better than other segments, such as investment in capital goods, it has been insufficient to correct the imbalance between supply and demand in the real estate sector. For further information on the housing deficit in Spain, see «Lack of new housing where it is most needed: a growing and geographically concentrated deficit», included in the *Real Estate Sector Report S1 2026*.

When compared with the previous cycle (see second chart), certain differences in the pattern of investment are apparent. The performance varied by component, and it is the construction segment – primarily housing – that took centre stage, growing by 47.8% between 2014 and 2019, which is more than triple the rate recorded by GDP (15.0%). Consequently, residential investment gained 1.2 points in terms of GDP during that period, reaching 5.6%. More modest, however, was the growth of investment in intangible assets (16.5%). In this latter case, its share of GDP remained stable (increasing by just 0.1 percentage points, to 3.4%).

Compared to our European partners, Spain shows a much more intense recovery in investment, with a cumulative growth of 13.1% since 2019, 10 points more than across the euro area as a whole (see third chart). Consequently, the investment rate – understood as investment as a percentage of GDP – has increased by half a point to 20.7%, thus significantly narrowing the gap with the European average to just 0.3 points, as seen in the fourth chart. Among the main euro area economies, the pattern is uneven, with Spain showing an average performance. At the top of the ranking, Italy clearly stands out, with growth of close to 34%. This is mainly explained by the construction segment, thanks to tax incentives (Superbonus, Transizione 4.0) and the rapid execution of European funds, which has raised its investment rate to 22.4%, almost 5 points more than in 2019.

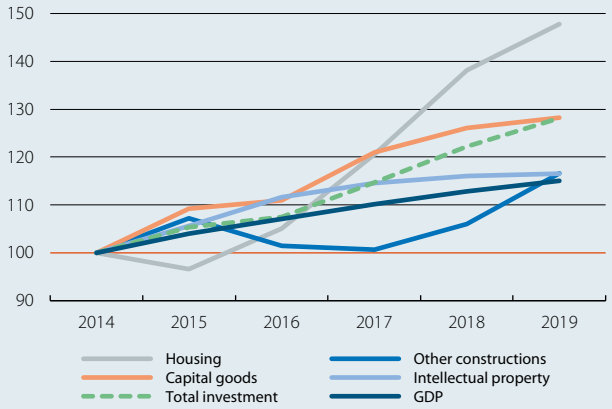
In contrast, investment in Germany shows a decrease of 7.7%, placing its share of GDP below 20%, which constitutes one of the main structural burdens on its recent growth. Of particular note is the deterioration in investment in capital goods, affected by the slowdown in industry, the energy crisis, lower foreign demand and the segment's high exposure to China, as well as in construction, due to fiscal rules and reduced investment in infrastructure. France shows a more stable pattern, with growth and investment rates close to the average (2.8% and 21.6%, respectively), partly due to industrial and fiscal policies that have cushioned the impact of the recent shocks.

In conclusion, in the post-pandemic cycle, the composition of investment has shown a different profile compared to the 2014-2019 period. Intangible assets have gained prominence, while investment in capital goods and construction has declined. Overall, since 2019, Spain has shown more dynamic investment than the euro area, which has enabled it to narrow the gap with the European average. For 2026, the maintenance of favourable financial conditions and the support of NGEU funds are significant support factors, although the geopolitical environment may influence the outlook, which was more favourable at the beginning of the year.

Sergio Díaz

Spain: investment by asset type

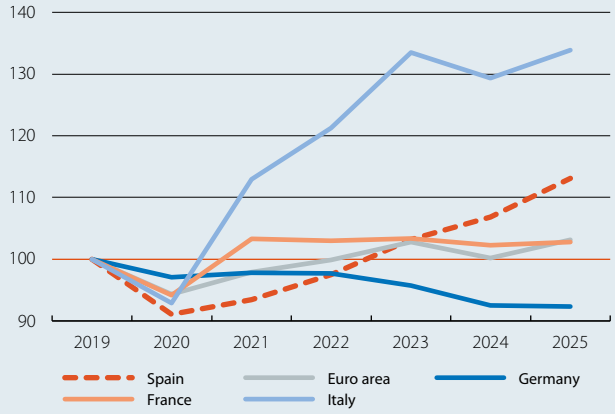
Index (100 = 2014)



Note: *Data in real terms.*
Source: *CaixaBank Research, based on data from the National Statistics Institute (INE).*

Europe: investment

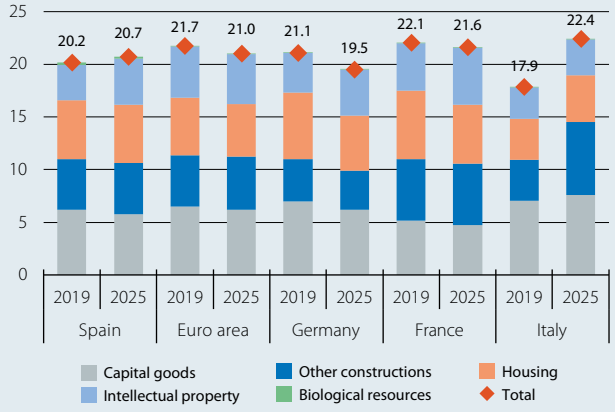
Index (100 = 2019)



Note: *Data in real terms.*
Source: *CaixaBank Research, based on data from the National Statistics Institute (INE) and Eurostat.*

Europe: investment by component

(% of GDP)



Note: *Data in real terms.*
Source: *CaixaBank Research, based on data from the National Statistics Institute (INE) and Eurostat.*

What do high-frequency data tell us about international tourism in Spain after the outbreak of the war in Iran?

The outbreak of the war in Iran has opened an uncertain chapter for international tourism in Spain. Although, historically, episodes of geopolitical instability in the Middle East have boosted tourism to Spain,[1] both the disruption at airport hubs in the Persian Gulf and the sharp rise in oil prices and the possibility of fuel shortages for air transport have raised doubts about the net impact of the conflict on the sector's growth.

For now, data from international cards used on CaixaBank point-of-sale terminals show that the growth of spending by international tourists increased from 10.7% year-on-year in February 2026 to 11.2% in March. This acceleration is mainly explained by the greater buoyancy of tourism from the United Kingdom, France and Germany, the three main source markets for tourists visiting Spain. Overall, tourism spending from these three countries accelerated by an average of 5.5%, placing the growth of all of them at double-digit rates.

This progress offset the decline in spending by tourists from East Asia, a region particularly affected by the disruptions to air transport. Tourism spending from China, Japan, South Korea, and the rest of Asia and Oceania went from growing at an average rate of 28.9% in February 2026 to falling by 0.9% in March, representing a deceleration of nearly 30 pps.

Although this decline, in absolute terms, was much greater than the acceleration observed in European tourism, its overall impact was limited by the small share that Asian tourism represents for the sector as a whole. In the last 12 months, Asia and Oceania accounted for just 3.2% of international tourism spending in Spain, compared to 74.4% in the case of European tourism. Thus, the resilience of European tourist flows to Spain, which was partly due to the redirection of these flows in favour of our country, more than offset the sharp slowdown in Asian tourism.

More striking was the evolution of tourism spending from the Middle East, which went from contracting by 1.8% in February to growing by 12.7% in March. This improvement, of 14.6 pps, seems to be due to the temporary relocation of residents from Gulf countries who fled the areas affected by the conflict.

Taken together, these data reinforce CaixaBank Research's forecast that the redirection of tourists from the Gulf and the eastern Mediterranean will contribute to a slight acceleration of Spain's tourism sector in 2026. There is, however, an important caveat: this scenario is consistent with a short-lived conflict. If, in a scenario with a prolonged conflict, this were to reduce the growth of gross disposable income in source countries by more than 2.5 pps, then the net effect of the conflict on international tourism in Spain would no longer be positive.

David Cesar Heymann

International tourism expenditure by origin

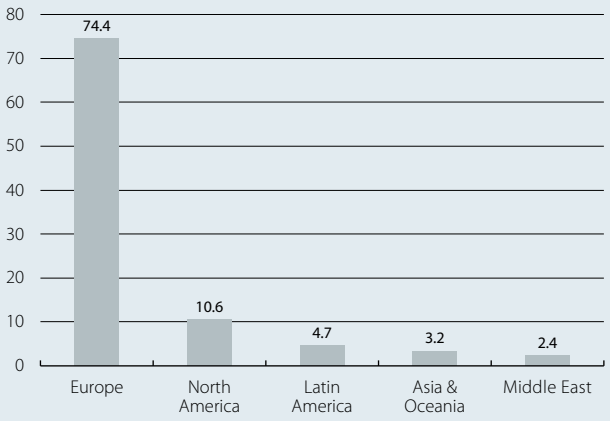
Year-on-year change (%)

	February 2026	March 2026	Difference March-February
Total	**10.7**	**11.2**	**0.5**
UK	9.4	14.3	4.9
France	8.3	15.0	6.7
Germany	7.8	12.5	4.8
Italy	12.1	7.3	–4.8
Rest of Western Europe	7.0	9.6	2.6
US	8.6	9.8	1.1
Latin America	26.6	24.8	–1.8
China	40.4	–8.9	–49.3
South Korea	16.4	2.7	–13.7
Japan	29.7	–1.5	–31.3
Rest of Asia & Oceania	28.9	4.3	–24.5
Middle East	–1.8	12.7	14.6

Source: *CaixaBank Research, based on data from CaixaBank POS terminals.*

Tourism expenditure by region

(% of the total)



Source: *CaixaBank Research, based on data from CaixaBank POS terminals.*

1. See the article «What are the trends for international tourism in Spain in 2024? A sensitivity analysis based on macroeconomic factors» in the *Tourism Sector Report S1 2024*.

Activity and employment indicators

Year-on-year change (%), unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Industry									
Industrial production index	0.4	1.3	1.5	2.4	1.6	...	–1.1	...	...
Indicator of confidence in industry *(value)*	–4.9	–4.8	–5.3	–4.9	–3.9	–3.2	–2.5	–4.4	–5.1
Manufacturing PMI *(value)*	52.2	50.9	50.0	52.6	51.1	49.3	50.0	48.7	51.7
Construction									
Building permits *(cumulative over 12 months)*	16.7	8.8	14.8	7.9	8.8	...	9.0	...	...
House sales *(cumulative over 12 months)*	9.7	11.6	22.9	18.8	11.6	...	8.7	...	...
House prices	8.4	12.7	12.7	12.8	12.9	...	...	...	...
Services									
Foreign tourists *(cumulative over 12 months)*	10.1	3.2	6.3	4.3	3.2	2.7	2.7	2.7	...
Services PMI *(value)*	55.3	54.5	52.2	54.2	56.4	52.9	51.9	53.3	47.9
Consumption									
Retail sales[1]	1.8	4.3	5.1	4.4	4.2	3.4	2.3	4.1	...
Car registrations	7.2	12.9	13.7	16.9	8.0	7.6	7.5	11.7	8.4
Economic sentiment indicator *(value)*	103.1	103.1	102.3	102.8	104.3	105.1	105.9	103.5	102.6
Labour market									
Employment[2]	2.2	2.6	2.7	2.6	2.8	2.4	...	...	...
Unemployment rate (% labour force)	11.3	10.5	10.3	10.5	9.9	10.8	...	...	...
Registered as employed with Social Security[3]	2.4	2.3	2.2	2.3	2.4	2.3	2.2	2.5	2.4
GDP	**3.5**	**2.8**	**2.9**	**2.7**	**2.6**	**2.7**	...	...	...

Prices

Year-on-year change (%), unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
General	2.8	2.7	2.2	2.8	3.0	2.7	2.3	3.5	3.2
Core	2.9	2.3	2.3	2.4	2.6	2.7	2.7	2.9	2.8

Foreign sector

Cumulative balance over the last 12 months in billions of euros, unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Trade of goods									
Exports *(year-on-year change, cumulative over 12 months)*	0.2	0.7	2.0	0.8	0.7	...	0.5	...	...
Imports *(year-on-year change, cumulative over 12 months)*	0.1	4.6	4.1	4.6	4.6	...	3.0	...	...
Current balance	**50.7**	**49.4**	**48.5**	**48.2**	**49.4**	**...**	**49.3**	**...**	**...**
Goods and services	66.3	64.5	64.0	62.5	64.5	...	67.7	...	...
Primary and secondary income	–15.7	–15.1	–15.5	–14.3	–15.1	...	–18.4	...	...
Net lending (+) / borrowing (–) capacity	**68.7**	**66.6**	**67.5**	**66.6**	**66.6**	**...**	**66.3**	**...**	**...**

Credit and deposits in non-financial sectors[4]

Year-on-year change (%), unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Deposits									
Household and company deposits	5.1	4.8	3.9	4.9	4.8	5.5	5.5	5.5	...
Demand and notice deposits	2.0	6.7	5.0	7.2	6.7	7.1	7.2	7.1	...
Time and repo deposits	23.5	–4.7	–1.5	–6.6	–4.7	–2.4	–2.8	–2.4	...
General government deposits[5]	23.1	4.9	25.5	7.2	4.9	5.1	3.8	5.1	...
TOTAL	**6.3**	**4.8**	**5.4**	**5.1**	**4.8**	**5.5**	**5.4**	**5.5**	**...**
Outstanding balance of credit									
Private sector	0.7	3.5	2.6	2.8	3.5	3.7	3.7	3.7	...
Non-financial firms	0.4	2.9	2.5	2.3	2.9	3.6	2.9	3.6	...
Households - housing	0.3	3.5	2.3	2.9	3.5	3.7	3.8	3.7	...
Households - other purposes	2.3	4.5	3.5	3.7	4.5	4.2	5.1	4.2	...
General government	–2.6	10.7	5.3	12.9	10.7	8.1	5.6	8.1	...
TOTAL	**0.5**	**3.9**	**2.7**	**3.4**	**3.9**	**4.0**	**3.8**	**4.0**	**...**
NPL ratio (%)[6]	**3.3**	**2.7**	**3.0**	**2.9**	**2.7**	**...**	**2.7**	**...**	**...**

Notes: *1. Deflated, excluding service stations. 2. LFS. 3. Average monthly figures. 4. Aggregate figures for the Spanish banking sector and residents in Spain. 5. Public-sector deposits, excluding repos. 6. Data at the period end.*

Sources: *CaixaBank Research, based on data from the Ministry of Economy, the Ministry of Transport, Mobility and Urban Agenda (MITMA), the Ministry of Inclusion, Social Security and Migration (MISSM), the National Statistics Institute (INE), S&P Global PMI, the European Commission, the Department of Customs and Excise Duties and the Bank of Spain.*

Portugal: the effects of the conflict begin to show through

The economy stagnates in Q1. The February storms and the initial impact of the conflict in the Middle East contributed to the stagnation of GDP in the first three months of the year. In the absence of the breakdown by component, the first GDP estimate indicates that consumption slowed, while investment accelerated sharply after the contraction of Q4 2025. Despite the positive contribution of domestic demand to growth, the contribution of foreign demand was negative due to the recovery of imports, probably linked to capital goods. In year-on-year terms, GDP grew by 2.3% (vs. 1.9% in Q1). The data highlight the adverse impact of heightened geopolitical risks and higher energy prices, which could continue to weigh down economic activity over the coming months, in a context marked by the deterioration of household disposable income and higher financing costs. Domestically, these factors could weigh on consumption and investment decisions, while in the international sphere, we expect an increase in the energy deficit and a slowdown in exports.

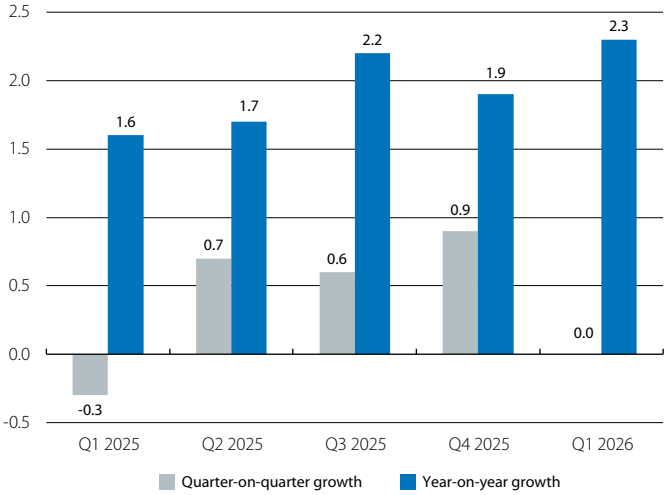
The April data confirms a bleak outlook for Q2. The European Commission's economic sentiment indicator fell to 100.4 points in April (just above the historical average of 100), due to a sharp drop in consumer and industrial sector confidence. On the other hand, headline inflation rose by 0.7 pps versus March and stood at 3.4%. More than 40% of the increase in the headline CPI is explained by the sharp rise in energy inflation (+11.7% year-on-year) and that of unprocessed foods (+7.5%). Underlying inflation also rose, albeit more moderately, to 2.2% (+0.2 pps).

Employment continued to grow in Q1, albeit at a slower pace. In Q1, the unemployment rate stood at 6.1% (+0.3 pps versus Q4 2025). Employment continued to grow in Q1 (2.3% year-on-year) – a positive sign, but with a slowdown relative to 2025 (3.2% for the year as a whole). The latest surveys show that firms remain optimistic about the employment outlook, particularly in construction, services and trade.

Storms and the war in Iran, with a negative fiscal impact. In its latest report, the government anticipates a balanced budget for 2026, compared to the surplus of 0.1% of GDP included in the 2026 general government budget. The revision is justified by the storms that battered the country at the beginning of the year, coupled with the conflict in the Middle East. The cabinet believes that the public accounts will remain compliant with European fiscal rules, allowing the public debt ratio to continue to decline (estimated at –2.1 pps in 2026) amid an economic slowdown.

Portugal: GDP

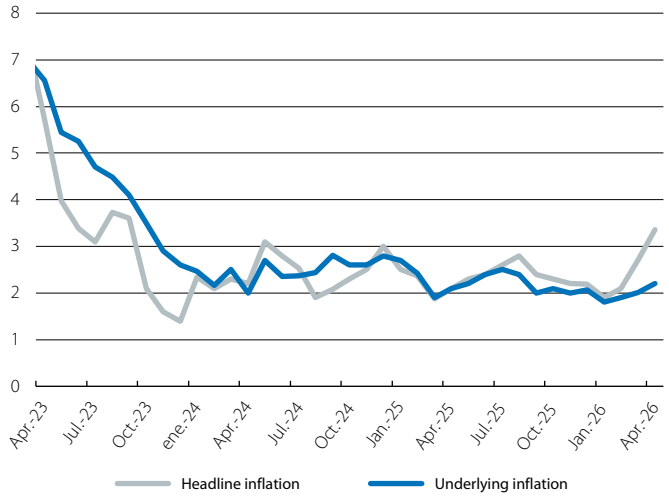
Change (%)



Source: *CaixaBank Research, based on data from the National Statistics Institute of Portugal.*

Portugal: CPI

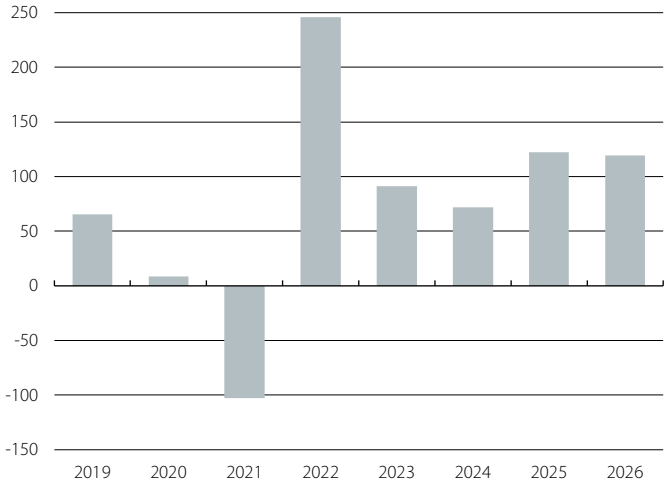
Year-on-year change (%)



Source: *CaixaBank Research, based on data from the National Statistics Institute of Portugal.*

Portugal: employment

Year-on-year change in Q1 (thousands of people)



Source: *CaixaBank Research, based on data from the National Statistics Institute of Portugal.*

Activity and employment indicators

Year-on-year change (%), unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Coincident economic activity index	2.0	2.0	1.8	2.0	2.2	2.1	2.1	2.0	...
Industry									
Industrial production index	0.8	0.5	1.2	2.8	0.3	...	–4.4	...	...
Confidence indicator in industry *(value)*	–6.2	–4.0	–4.8	–3.4	–2.8	–2.0	–2.1	–2.4	–2.7
Construction									
Building permits - new housing (number of homes)	6.5	20.6	20.3	8.9	16.1	...	–9.3	...	...
House sales	14.5	15.5	15.5	3.8	–4.7	...	–	–	–
House prices *(euro / m² - valuation)*	8.5	17.4	17.4	18.2	18.4	17.5	17.2	16.5	...
Services									
Foreign tourists *(cumulative over 12 months)*	6.3	1.9	4.1	2.6	1.9	2.2	1.7	2.2	...
Confidence indicator in services *(value)*	5.6	10.1	6.6	12.9	8.4	4.9	5.0	5.0	6.2
Consumption									
Retail sales	3.3	4.8	4.8	5.4	4.4	...	4.9	...	...
Coincident indicator for private consumption	2.8	3.4	3.5	3.1	3.1	3.0	3.0	2.8	...
Consumer confidence index *(value)*	–18.0	–16.2	–17.9	–16.2	–15.2	–16.2	–15.3	–18.7	–23.9
Labour market									
Employment	1.2	3.2	2.9	3.7	3.7	...	2.2	2.2	...
Unemployment rate (*% labour force*)	6.4	6.0	5.9	5.8	5.8	...	5.8	5.8	...
GDP	**2.2**	**1.9**	**1.7**	**2.2**	**1.9**	**...**	**–**	**–**	**–**

Prices

Year-on-year change (%), unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
General	2.4	2.3	2.2	2.6	2.2	2.2	2.1	2.7	3.4
Core	2.5	2.2	2.3	2.3	2.1	1.9	1.9	2.0	2.2

Foreign sector

Cumulative balance over the last 12 months in billions of euros, unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Trade of goods									
Exports *(year-on-year change, cumulative over 12 months)*	2.0	0.6	4.2	2.0	0.6	...	–3.8	...	...
Imports *(year-on-year change, cumulative over 12 months)*	2.0	4.0	7.0	6.7	4.0	...	2.3	...	...
Current balance	**6.5**	**3.8**	**3.5**	**3.0**	**3.8**	**...**	**3.3**	**...**	**...**
Goods and services	6.4	3.7	4.0	3.5	3.7	...	3.3	...	...
Primary and secondary income	0.1	0.1	–0.5	–0.5	0.1	...	–0.1	...	...
Net lending (+) / borrowing (–) capacity	**9.6**	**8.3**	**6.9**	**7.0**	**8.3**	**...**	**7.8**	**...**	**...**

Credit and deposits in non-financial sectors

Year-on-year change (%), unless otherwise specified

	2024	2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	02/26	03/26	04/26
Deposits [1]									
Household and company deposits	7.5	5.4	5.4	6.3	5.4	6.4	5.1	6.4	...
Sight and savings	–0.3	8.1	5.1	8.6	8.1	7.9	8.0	7.9	...
Term and notice	15.3	3.1	5.8	4.3	3.1	5.2	2.6	5.2	...
General government deposits	26.7	28.7	39.6	–0.5	28.7	20.4	29.2	20.4	...
TOTAL	**7.9**	**6.0**	**6.4**	**6.1**	**6.0**	**6.9**	**5.9**	**6.9**	**...**
Outstanding balance of credit [1]									
Private sector	1.9	6.6	4.9	5.8	6.6	7.7	6.8	7.7	...
Non-financial firms	–1.0	2.6	2.0	2.2	2.6	4.3	2.7	4.3	...
Households - housing	3.0	9.3	6.4	8.0	9.3	9.9	9.6	9.9	...
Households - other purposes	5.4	7.0	6.6	6.9	7.0	8.4	7.2	8.4	...
General government	0.6	6.4	3.8	4.8	6.4	3.2	4.9	3.2	...
TOTAL	**1.9**	**6.6**	**4.8**	**5.7**	**6.6**	**7.5**	**6.7**	**7.5**	**...**
NPL ratio *(%)* [2]	**2.4**	**2.1**	**2.3**	**2.3**	**2.1**	**...**	**–**	**–**	**–**

Notes: *1. Residents in Portugal. The credit variables exclude securitisations. 2. Period-end figure.*
Source: *CaixaBank Research, based on data from the National Statistics Institute of Portugal, Bank of Portugal and Refinitiv.*

Artificial intelligence: a supply-side perspective

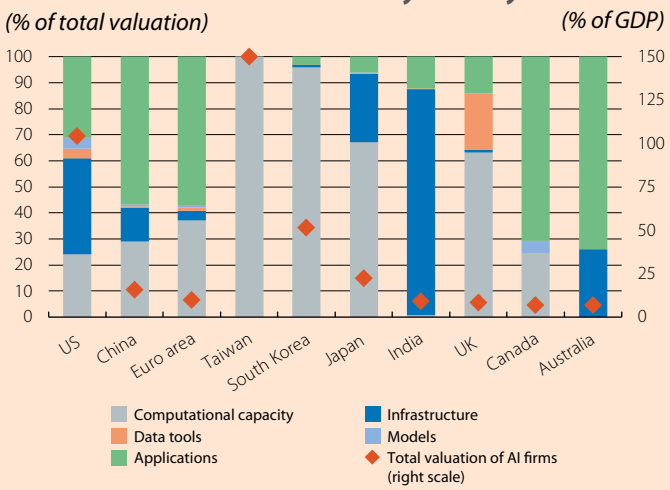
Artificial intelligence (AI), in a broad sense, is the ability of machines and computational systems to replicate human intelligence in the perception, synthesis and inference of information, thereby performing tasks which previously could not be carried out or traditionally required human cognitive abilities, such as language comprehension, pattern recognition and decision-making.

While the development of this technology dates back to the 1950s-60s, advances in large language models (LLMs) over the past decade, along with improvements in processing power and mass data collection, have driven more recent developments in so-called generative AI, capable of producing text, code and audiovisual material based on patterns learned from large datasets.

The AI value chain: complex and heterogeneous from country to country

The development of AI relies on a complex value chain composed of several interdependent links.[1] At its core lies access to critical minerals used in the manufacture of semiconductors, the «physical brain» of AI. These components are integrated into a broader computational infrastructure comprising data centres, communication networks, power grids and cloud computing services, together forming the «body» that enables large-scale data processing. On top of this infrastructure lies access to large volumes of data for training models. The development of so-called foundational models represents in itself the next link in the chain and requires sophisticated algorithms and neural networks for deep learning. Finally, the value of generative AI is realised in the development of specific applications built on foundational models, such as virtual assistants or content generation systems, and in its integration into digital products and services, which are the main point of contact with the end user.

Structure of the AI value chain by country



Note: *In the case of Taiwan, the total valuation of AI firms (as a % of GDP) is 207.2%.*
Source: *CaixaBank Research, based on data from the BIS (K. Rishabh and V. Shreeti (2026), «The geography of AI firms», BIS Working Papers 1343).*

Currently, AI value chains vary widely across the major economies (see first chart). On one hand, in the US and several Asian nations the sector plays a significant role in the economy, measured in terms of AI firm valuations as a percentage of GDP. Among these, Taiwan and South Korea are highly specialised in computational capacity, while the US has a more diversified value chain. On the other hand, in China and several advanced economies, AI plays a somewhat smaller role in the economy and they also have different specialisations. Japan and the United Kingdom show greater specialisation in computational capacity (and data tools, in the case of the latter), while in China and the euro area there is a greater emphasis on applications.

AI deployment, from innovation to adaptation

The deployment of AI can be divided into four key phases: the innovation phase, the development of new infrastructure, the diffusion and widespread adoption of the new technology, and the adaptation of business models and markets to the new technology.

In this context, the global economy is still immersed in the first two phases of AI deployment. There is ample evidence of an investment boom related to innovation and infrastructure construction, which is particularly evident in countries such as the US and some Asian nations.[2] In this context, AI capabilities are improving at an exponential rate. This progress is being supported by

1. See O. García Retuerta and D. García Retuerta (2026), «La cadena de valor de la inteligencia artificial: estrategias de autonomía para España», IEEE Opinion Document 03/2026, Spanish Ministry of Defence, Spanish Institute for Strategic Studies; and McKinsey & Company (2023), «Exploring opportunities in the generative AI value chain», QuantumBlack, AI by McKinsey.
2. See the article «The AI buzz in financial markets», in this same Dossier.

hyperscaling, driven by rapid advances in the amount of data used to train models, the number of parameters, and computational capacity. At the same time, the surge in supply and demand is creating infrastructure bottlenecks.[3]

AI supply indicators in the US, the EU and China

	China	US	EU-27
Innovation, infrastructure and procurement			
Market share for logic chip production, by manufacturing stage[1]			
Design	9.0	61.0	0.0
Fabrication	12.0	27.0	2.0
Assembly, testing and packaging	14.0	28.0	0.0
Granted AI patents (per 100,000 people)[2]	7.0	4.7	2.6
Scholarly publications on AI (per million people)[1]	72.7	145.7	139.4
Highest score achieved by an AI model (MMLU)[3]	90.6	92.5	84.0
Number of data centres[2]	449.0	5,427.0	1,461.0
Number of notable data models (2021-2025)[2]	108.0	331.0	44.0
Number of cumulative GitHub stars (millions)[2]	9.0	30.0	13.0
Innovation Index (Global AI Vibrancy Tool)[2]	5.1	20.7	3.0
Adoption, diffusion and adaptation			
AI adoption rate among the population[2]	17.0	28.3	31.2
Industrial robots in operation (per 10,000 employees)[4]	166.0	307.0	266.0
Number of industrial robots installed in the last year (thousands)[4]	276.3	37.6	50.3
Electricity consumption of data centres (% of total electricity demand)[5]	1.1	4.4	2.3
Digital infrastructure (AI Preparedness Index)[6]	0.19	0.19	0.17
Innovation and economic integration (AI Preparedness Index)[6]	0.15	0.18	0.16
Human capital and labour market policies (AI Preparedness Index)[6]	0.15	0.18	0.16
Graduates from STEM programmes (% of total, tertiary education)[7]	41.0	20.0	25.0
Digital-intensive sectors' share in total employment (% of total employment)[8]	28.0	47.8	47.4
ICT goods and services (% of international trade)[8]	22.2	9.8	7.5
Digital Services Trade Restrictiveness Index[8]	0.29	0.06	0.11

Note: *The latest available year is used for each series, unless otherwise stated. In cases where data for the EU aggregate is unavailable, the average is calculated using the available countries. Values in red indicate more negative performance, yellow medium, and green more positive. Sources: [1] Our World in Data, [2] Stanford University Institute for Human-Centered AI, [3] MMLU-Pro Benchmark Leaderboard, [4] International Federation of Robotics (IFR), [5] International Energy Agency (IEA), [6] International Monetary Fund (IMF), [7] World Bank and Center for Security and Emerging Technology - Georgetown University, [8] OECD.*
Source: *CaixaBank Research, based on various sources.*

As has been the case with other technologies in the past, some economies will not play a decisive role in the innovation phase, but will benefit from adoption, diffusion and adaptation to the technology. If we focus on the comparison between the US, the EU and China, we can see important nuances in different phases of the deployment process. In the innovation phase, the US economy is taking a clear lead, as is particularly evident in indicators related to output (such as the performance of models at the technological cutting edge, academic publications and open-source development) and infrastructure (such as the number of data centres and chip design). Yet China has shown a remarkable ability to catch up with the technological frontier in recent years. Its most advanced models show a very similar level of performance to their American counterparts, while the dynamism observed in the granting of patents and the development of models points to a boom in innovation. The EU, meanwhile, is not so well positioned in terms of innovation, according to most indicators. In particular, its low market share in chip production makes it highly dependent in this sphere, while it is lagging behind China and the US in the development of AI models. Finally, China is leading in the supply of materials, due to its access to critical minerals and its processing capacity for chip and semiconductor manufacturing.[4]

In indicators related to adoption, diffusion and adaptation, the picture is somewhat more homogeneous. Adoption in the three major economies, in terms of the proportion of the population currently using AI, stands at around 30% in the EU and the US, while for China it is just under 20%.[5] Similarities are also found in their degree of readiness for adoption, diffusion and adaptation,

3. For example, METR, a metric which measures AI performance based on the maximum task length (time horizon) a model can handle, shows that in recent months it can now satisfactorily perform tasks that would require several hours, whereas a year ago models could only handle tasks with a duration of minutes. See also «The AI Index 2026 Annual Report», by Stanford University's Institute for Human-Centered AI. The main infrastructure bottlenecks are found in the chip market, but also in data centre capacity and in the energy market.
4. See «China's alchemy: how it transforms critical minerals into global power» in the MR01/2026.
5. These are significant figures that indicate a substantially higher adoption rate than that of previous technologies. Business adoption figures, meanwhile, show greater dispersion by function, sector and degree of implementation. See «The AI Index 2026 Annual Report», by Stanford University's Institute for Human-Centered AI.

albeit with a slight advantage for the US. On the other hand, in recent years China's manufacturing sector has undergone a very rapid modernisation – and «robotisation» – process, anchored in an aggressive industrial policy and significant investment in infrastructure and human capital. This places it in a strong position to benefit from the difussion of and adaptation to AI, especially as a global supplier of advanced technologies. Finally, the European and US economies are more intensive in digital services, positioning them as potential leaders in the adaptation phase, the speed and magnitude of which will be key to determining the macroeconomic effects of AI.[6]

The global economy, in the early miles of the AI marathon

The «AI race» is still in its early stages. While the US has taken the lead in the innovation phase, the pack is closing in, led by China, and it is unlikely that the race will be decided between just two participants. Given its transformative potential, the success of the deployment of AI and its macroeconomic impact will depend on the business sector's ability to adapt and manage the frictions associated with this new technology. However, AI will also require an active role from states, both in its regulation and in its adoption, diffusion, adaptation and coordination at a global level, promoting the necessary improvements in terms of institutions, infrastructure and human capital.[7] The task ahead is complex and will require new tools of public policy and economic diplomacy. Moreover, the AI supply model that is ultimately adopted – whether in fragmented blocks centred around the US or China, or more integrated globally – will have implications that extend beyond the economy. The AI marathon is only just begun, and everyone is taking part.

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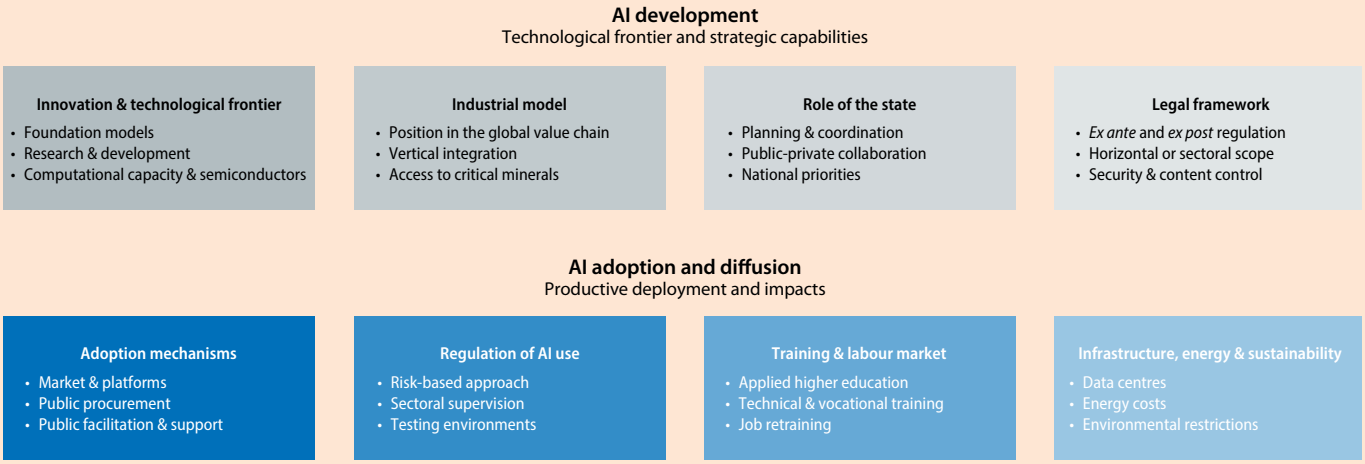
6. For further details, see the article «Productivity and employment in the face of generative AI: what do we know?», in this same Dossier.
7. For further details, see the article «Differentiated strategies for governing AI: towards cooperation or conflict?», in this same Dossier.

Differentiated strategies for governing AI: towards cooperation or conflict?

Generative artificial intelligence (AI) is a critical area of economic and strategic competition among the major powers, and its development depends both on the dynamism of the private sector and on state action. Together, they shape the scope and effects of a technology whose complex ecosystem spans innovation and its monetisation, positioning in the value chain, its diffusion and adoption, and the management of its externalities. This article reviews – from a geoeconomic perspective – the strategies adopted by the US, China and the EU in key areas such as regulation, the role of the state in the industrial model, public support instruments, and cross-cutting policies such as professional training and sustainability. We conclude with a reflection on the future interaction of these governance models and the potential areas of friction and cooperation that may arise.

AI governance: from development to adoption

Analytical framework for international comparison



Source: *CaixaBank Research.*

The US seeks to shape the technological frontier

The potential of AI lies in the complexity, speed and reliability with which it performs tasks. Its development relies on a combination of cutting-edge knowledge for the design of language models, computers equipped with high-capacity processing chips, and a robust architecture – both physical (data centres) and digital (cloud infrastructure) – for information storage and model training.

In this field, the US has consolidated its position at the global AI frontier thanks to its human capital, technological capabilities and a favourable business environment.[1] It boasts an innovative ecosystem based on elite universities and a concentration of STEM and international research talent. It also benefits from public support as an early incubator, led by both civilian agencies (NSF) and defence agencies (DARPA), and from a business cluster with large tech firms that are embedded into the economy's industrial base and have both financial muscle and an appetite for risk. Added to this are favourable tax and regulatory frameworks, with minimal intervention during the development phase, still lacking a comprehensive federal law[2] and with a predominance of *ex post* intervention. The Trump administration's action plan has placed even greater focus on the technological frontier with a marked geostrategic emphasis,[3] setting an explicit goal for US semiconductors, models and applications to be hegemonic on a global scale and become the new «gold standard».[4]

In contrast, state planning, coordination and guidance are the foundation of the Chinese model. While it is private companies that have capitalised on the exponential improvement of technological capabilities in the last decade, AI research and development

1. According to estimates based on data from Epoch AI, the US accounts for two-thirds of the world's AI-related computational capacity, followed by China with around 20%, while the EU accounts for just 5%.
2. The only general AI law in effect in the US is the one passed by the state of Colorado in 2024.
3. White House (2025), «America's AI Action Plan».
4. It thus shifts the previous focus on the coordination of the innovative ecosystem and industrial resilience as outlined in the National Artificial Intelligence Initiative Act (2020) and the CHIPS and Science Act (2022).

are aligned with national priorities. Whereas the US seeks to define the technological frontier, China prioritises key links in the global industrial value chain,[5] scale, technological self-sufficiency and security. Subsidies, tax incentives and public financing mechanisms, both at the central and provincial levels, are all contributing to this. This approach is complemented by the preventive control of socially sensitive content, including registration and assessment requirements *ex ante* for recommendation systems in digital applications.[6] Recent regulation reinforces the limits on public dissemination of information while maintaining greater relative freedom in the research, development and training of models for productive or strategic uses.[7]

The EU, for its part, is seeking to establish a common governance framework to overcome the prevalence of national frameworks in AI development. The main strength of the European innovative ecosystem is its scientific and research base, with universities and centres of excellence. However, it suffers from insufficient supranational coordination and limited prioritisation of its framework programmes, such as Horizon Europe. The financial system is less geared towards risk-taking and, together with the fragmentation of the internal market, hinders the transfer and monetisation of knowledge, as well as the scaling-up of the technology.[8] To protect its citizens, the EU's regulatory framework prioritises *ex ante* regulation of the uses of AI based on risk,[9] which can shift its development away from the cutting edge of innovation. Added to this is a high external dependency on advanced semiconductors and foundation models, which the EU is attempting to mitigate through open strategic autonomy and diversification of economic partners.[10]

China prioritises adoption and diffusion with productive uses

Beyond technological development, the economic and social impact of AI largely depends on how its adoption and diffusion are governed. In these areas, the approach adopted by the main players also varies widely.

In the US, it is private entrepreneurial initiative and competition that is taking the lead, with the major tech platforms and software providers acting as natural channels for scaling up towards businesses and consumers. State action focuses on removing barriers, providing critical infrastructure, and using public procurement – especially in defence and security – as a driving mechanism for adoption. Regulation is mostly *ex post*, guided by voluntary standards of cross-sector application defined by a federal scientific agency (NIST), along with sectoral oversight in sensitive areas, such as the protection of healthcare patients and financial services clients. Based on this logic of minimal intervention, the state acts as a facilitator and largely leaves the management of cross-cutting areas to the market, although the new national regulatory framework includes recommendations for professional retraining and to limit the impact of the expansion of data centres on electricity costs.[11]

In the Chinese model, as in the development phase, the public sector plays a key role. The state acts as the coordinator of the ecosystem, *ex ante* regulator, financier and demander, channelling substantial public investment through large state-owned enterprises and into strategic sectors such as advanced industry, logistics, energy and security. The planned schedule includes sectoral and territorial penetration objectives at different time horizons, with a roadmap that is due to culminate in a fully «smart» economy and society by 2035.[12] To this end, vertical programmes for the transformation of the industrial value chain have been defined,[13] with controlled competitive environments that facilitate the assessment of scalability without transferring risks to the wider system, such as regulatory sandboxes and pilot zones. This approach is accompanied by the integration of AI into higher education and technical and professional training programmes. Energy and infrastructure planning forms part of the deployment strategy, while sustainability is subordinated to national economic security priorities.

Unlike in the US, where the diffusion of AI relies on large private platforms, and in China, where the state acts as a centralised demander, in the EU the adoption and diffusion of AI is primarily structured through an approach based on regulation and public support. The fragmentation of the internal market and *ex ante* regulatory obligations for high-risk uses limit the pace and scale of

5. See the Focus «China's alchemy: how it transforms critical minerals into global power» in the MR01/2026.
6. Cyberspace Administration of China, CAC (2021), «Algorithm Recommendation Provisions». CAC (2023), «Interim Measures for the Management of Generative AI Services», CAC (2023), «Deep Synthesis Provisions» and CAC (2025), «AI-generated Content Labeling Rules».
7. CAC (2023), «Interim Measures for the Management of Generative AI Services», CAC (2023), «Deep Synthesis Provisions» and CAC (2025), «AI-generated Content Labeling Rules».
8. M. Draghi (2024), «The Future of European Competitiveness».
9. EU (2024), Artificial Intelligence Act.
10. The «AI Continent» Action Plan, presented by the Commission in 2025, extends the strategic public intervention approach applied to semiconductors in the European Chips Act (2023), complemented by the objectives of the Critical Raw Materials Act (2024) to ensure a secure and sustainable supply of critical raw materials.
11. White House (2026), «Artificial Intelligence: national policy framework».
12. These objectives are defined by the work programme of the AI Plus initiative launched in 2024 by the State Council, similar to the Internet Plus initiative of 2015.
13. e.g. the AI+ Manufacturing initiative launched in 2025 under the umbrella of AI Plus.

adoption.[14] Public-sector action combines regulation with EU-wide instruments – such as the Apply AI Strategy – and practical support – such as hubs and testing environments – aimed at facilitating sectoral implementation and reducing legal uncertainty.[15] This approach tends to increase adoption costs and slow down dissemination, especially among SMEs, where fixed costs and skills deficits weigh more heavily. Added to this are structural limiting factors, such as high energy costs and environmental commitments associated with the deployment of compute-intensive infrastructures.[16]

The EU seeks its place in AI geopolitics

The rivalry between the US and China in the AI era is unfolding amid significant strategic uncertainty.[17] It is unclear whether the advantage of being at the technological frontier will generate persistent revenue streams that are difficult to replicate or whether competition will shift towards dissemination, deployment, and the ability to scale up applications in key sectors. In both scenarios, the power associated with AI will largely depend on the control of key assets – advanced chips, computing capacity, energy, talent, and industrial integration – so betting on a single trajectory could prove costly if the evolution of the technology diverges from the initial assumptions.

This framework tends to place middle powers in a position of technological dependence.[18] The concentration of talent, investment, and computing capacity in the US and China limits the scope of influence over the direction of technological change and amplifies the economic and social adjustment costs associated with AI. For the EU, the risk of falling behind reinforces the debate surrounding the balance between regulation, competitiveness and scale. In particular, the Draghi report's diagnosis on internal market frictions and the difficulty of scaling up innovation aligns with the recent shift towards approaches based on simplification and regulatory proportionality. The goal of this shift is to prevent legal certainty from ultimately penalising adoption and scale-up, especially among SMEs.[19]

Nevertheless, AI governance is not necessarily reduced to bloc logic. Even in a context of strategic rivalry, recent multilateral initiatives show areas for coordinating principles and practices. Thus, the focus on security and regulation at the summits in London (2023) and Seoul (2024) has expanded to encompass a more comprehensive agenda of innovation, digital skills, labour impact, and sustainability in Paris (2025), and the emphasis on capacity gaps between advanced and emerging economies in New Delhi (2026). In this vein, the framework promoted at the United Nations suggests a more inclusive and distributed global architecture based on common principles and mechanisms that are complementary to national and regional strategies.[20] For the EU, the challenge will be translating this cooperative agenda into real adoption and scale-up capabilities.

David Martínez Turégano

14. M. Draghi, *op. cit.*
15. The AI Act (2024) establishes support mechanisms for AI deployment to facilitate regulatory compliance in high-risk uses, while the Apply AI Strategy (2025) integrates them into an action plan aimed at accelerating adoption, especially among SMEs and government entities.
16. IEA (2025), «Energy and AI».
17. Foreign Affairs (2026), «Geopolitics in the Age of Artificial Intelligence: Strategy and Power in an Uncertain AI Future».
18. Foreign Affairs (2026), «The AI Divide: How U.S.-Chinese Competition Could Leave Most Countries Behind».
19. The European Commission's proposal set out in the Digital Omnibus package of November 2025 – currently being negotiated among co-legislators – introduces a more pragmatic tone in the regulatory approach, with adjustments aimed at reducing the burden and facilitating technological adoption without altering protection objectives.
20. United Nations (2024), «Governing AI for Humanity».

AI adoption in Spanish firms is advancing rapidly but remains limited and uneven

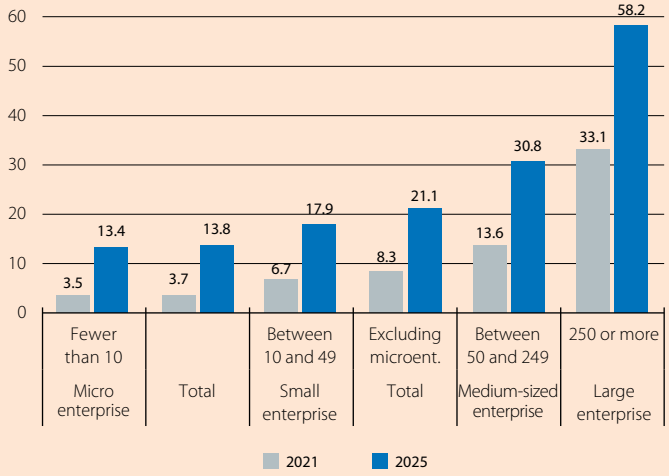
The adoption of artificial intelligence (AI) in Spanish firms has accelerated in recent years, but the process has been uneven and remains incomplete. This article analyses the extent of AI penetration considering four key dimensions: company size, sectoral differences, specific uses within organisations and the main barriers hindering its deployment, as well as a comparison with the rest of Europe. Understanding how and where AI is being incorporated is particularly important from a business and macroeconomic perspective, as its adoption influences efficiency and productivity gains and can widen gaps between firms, sectors and workers in a productive fabric like Spain's, which is dominated by SMEs and microenterprises.

Business adoption: size matters

Between 2021 and 2025, the adoption of AI technologies in Spain's economy has more than doubled in firms with over 10 employees,[1] going from 8% to 21%, suggesting that AI is no longer an experimental technology. Nevertheless, in 2025, nearly 8 out of 10 firms were still not using it, suggesting that widespread adoption has not yet occurred.[2]

Companies employing AI technologies

(% of all companies)



Source: *CaixaBank Research, based on data from the National Statistics Institute.*

The first key conclusion is that company size is a decisive factor. AI is present in nearly 3 out of every 5 large firms, but only in 18% of those with fewer than 50 employees. This gap reflects barriers that go beyond technology, related to financial resources, the availability of data, qualified personnel and organisational capacity.

These differences have not diminished in the period 2021-2025. Although adoption is growing across all company sizes, progress has been far more rapid in large firms (+25 pps) than in small ones (+11 pps). Medium-sized companies (between 50 and 250 employees) reflect a turning point: their level of adoption (31%) is significantly higher than that of small businesses (18%), suggesting they meet a threshold of sufficient resources to experiment with AI.

If microenterprises were included in the analysis, the aggregate adoption rate would fall considerably: instead of 21%, it would be 14%, as these entities have a very low adoption rate (13%) and account for 95% of Spain's productive fabric.[3]

Highly mixed picture of AI adoption by sector

In 2025, the sectors with the highest adoption of AI were information and communications and the ICT sector,[4] with percentages of around 60% – significantly above the levels observed in 2021 (26-27%). In these sectors, AI has become quite prevalent, in line with their greater intensity in intangible capital, the availability of data and their proximity to technological supply.

In a second tier are knowledge-intensive services, such as professional and scientific activities (38.5%) and real estate activities (35%). Thirdly, a wide range of sectors show moderate adoption levels, at around 20%-26%, spanning both services and industry: basic supplies, hospitality and the automotive and electronics sectors.

1. Excluding companies with fewer than 10 employees is also the most commonly used metric for international comparison purposes.
2. For this analysis of the adoption of AI tools by Spanish firms, we use data from the National Statistics Institute's Survey on the Use of ICT and E-commerce in Enterprises. Given that the survey separates companies with fewer and more than 10 employees, the total figure is obtained by weighting both groups according to the business structure (National Statistics Institute's Central Business Register): according to our calculations, AI adoption rises from 4% in 2021 to 14% in 2025.
3. It is also interesting to look at adoption not in terms of companies, but employees. Weighted by employment (and including all companies, even microenterprises), it is estimated that in 2025 around 31% of workers in Spain were employed in companies using AI technologies. This is because adoption is concentrated in medium and large enterprises, which account for a much larger proportion of total employment. This result is obtained by combining AI adoption rates by company size with data on job distribution by size, according to the European Commission's 2025 SME Country Fact Sheet (Eurostat/JRC).
4. The ICT sector includes activities such as the manufacture of electronic components and equipment, software publishing, telecommunications, IT and data processing services, and the repair of ICT equipment (sections 261–264, 268, 465, 582, 61, 6201–6209, 631 and 951 of the National Classification of Economic Activities (CNAE)).

At the lower end we find construction, metallurgy, and transport and logistics, where adoption remains low. Overall, although some sectors are approaching widespread AI usage, the economy remains in an intermediate phase, with significant margin for future dissemination concentrated in the sectors and firms that are lagging the furthest behind.

What are our companies using AI for?

The next issue is to identify the specific functions for which AI is being used in each sector. To this end, we distinguish between two major types of applications. On one hand, we find AI used in processes, aimed at improving organisational and commercial efficiency, such as internal management, administrative tasks or sales support. On the other hand, there is AI linked to the productive core, that is, uses applied directly in the production of goods or in the provision of the main service.[5]

In this context, adoption is considered superficial when AI is primarily used in processes rather than in the production of goods or services; and it is considered deep when AI is employed to a greater extent in production rather than in management tasks. There is another group of sectors where AI adoption is currently in a transition phase, moving from its use in processes towards greater use linked to production. Most of the adoption in sectors such as hospitality, commerce and administrative activities is found in processes. In these cases, AI is initially introduced in cross-functional management and commercial support roles, where implementation costs and organisational risks are lower, before extending to the productive core.

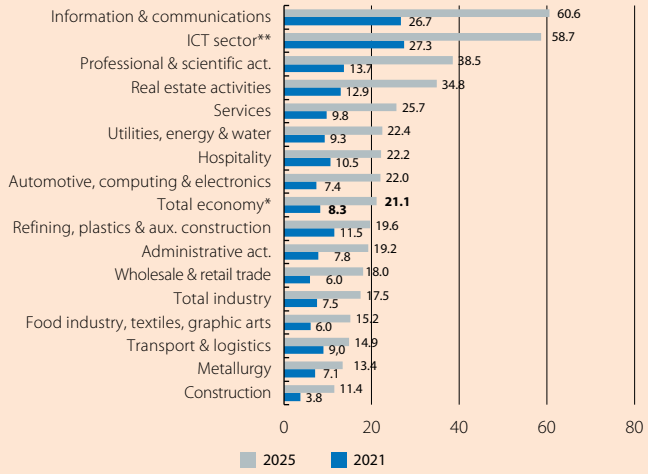
In an intermediate position we find sectors such as food and textiles, professional and scientific activities, and construction, with a transitional adoption where both types of uses coexist. AI is beginning to permeate operational decisions, but it does not yet play a dominant role in core business activities.

Finally, sectors such as information and communications and the ICT sector show a high level of adoption both in processes and in the productive core. In these fields, AI is not merely an efficiency tool but an integral part of the product, service and digital infrastructure.

Overall, the pattern observed suggests that the recent progress in adoption within the Spanish economy has been primarily driven by horizontal uses, which are quick to implement, low-cost, and more oriented towards administrative tasks than production processes. This is consistent with what Daron Acemoglu has documented for the US, where improving quality and the reliability of processes is the main motivation for adopting AI.[6] The big unknown for the impact on aggregate productivity is when the use of AI will become widespread in operational and core business uses, which require greater integration, investment, and the redesign of processes.

Companies employing AI technology by sector

(% of all companies with 10 or more employees)

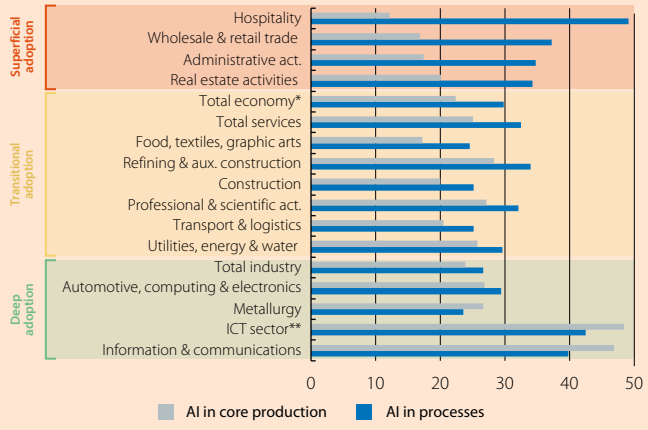


Notes: ** The financial sector is excluded. ** Manufacturing of electronic components and equipment, software publishing, telecommunications, IT and data processing services, and repair of ICT equipment (sections 261-264, 268, 465, 582, 61, 6201-6209, 631 and 951 of the National Classification of Economic Activities (CNAE)).*

Source: *CaixaBank Research, based on data from the National Statistics Institute.*

*Level of AI adoption according to the use of these technologies by sector**

(% of all companies with 10 or more employees)



Notes: ** The financial sector is excluded. ** Manufacturing of electronic components and equipment, software publishing, telecommunications, IT and data processing services, and repair of ICT equipment (sections 26-264, 268, 465, 582, 61, 6201—6209, 631 and 951 of the National Classification of Economic Activities (CNAE)).*

Source: *CaixaBank Research, based on data from the National Statistics Institute.*

5. We consider process AI to include uses in business administration and management, marketing and sales, accounting and finance, ICT security, and support for information analysis. Conversely, production AI is considered that directly linked to the production of goods, the direct provision of services, logistics and operations, as well as advanced R&D, such as automation, simulation and process optimisation.

6. See D. Acemoglu *et al.* (2022). «Automation and the workforce: a firm-level view from the 2019 annual business survey». NBER Working Paper, 30659, National Bureau of Economic Research.

The main barrier to greater adoption is the lack of skills

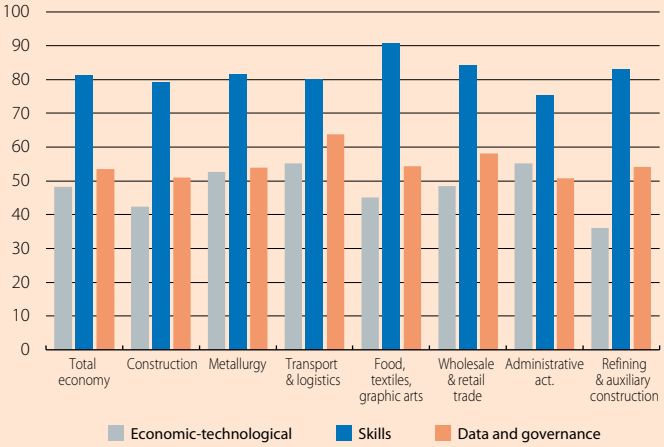
Among the reasons hindering AI adoption, we can distinguish three groups: (i) economic-technological barriers (primarily high costs), (ii) skills, and (iii) data and governance – the quality and availability of data, privacy, and legal clarity. In sectors with below-average adoption, the main and most commonly cited barrier is a skills issue. Below, we set out the barriers related to data and governance, before covering economic-technological barriers.

International comparison: we are catching up, but remain behind the European leaders

Data from the European Commission reveal that AI adoption rates in 2025 among Spanish firms with over 10 employees are close to the euro area average (albeit still 5 points below). In large firms, the adoption rate is practically identical between Spain and the euro area; the difference is greater (–7 pps) in medium-sized firms.

What are the main barriers to AI adoption?

(% of all companies with 10 or more employees)

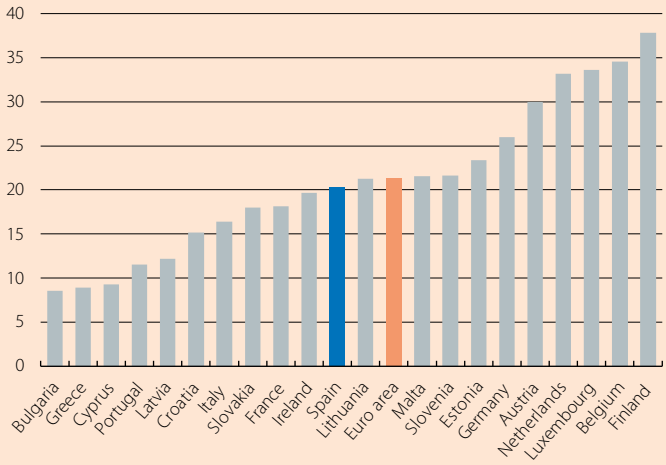


Note: *The chart considers sectors with AI adoption below the economy's average in Q1 2025.*
Source: *CaixaBank Research, based on data from the National Statistics Institute.*

Compared to the main European economies, the percentage of firms using AI in Spain exceeds that of Portugal, Italy and France, but is below that of Germany and the Netherlands. The recent acceleration in Spain is particularly noteworthy: between 2021 and 2024, adoption increased by just 3 pps (half that of the euro area), whereas between 2024 and 2025 the increase reached 9 pps – outpacing the euro area average and that of Germany, France or Italy.

Euro area: companies using AI in 2025

(%)



Source: *CaixaBank Research, based on data from Eurostat.*

In summary, there is progress in AI adoption among Spanish firms, but it remains limited and highly uneven. Firstly, company size is crucial: large firms are adopting AI to a much greater extent than SMEs and microenterprises – which are predominant in the country's productive fabric – potentially widening productivity gaps. Secondly, AI is primarily introduced in cross-functional management and commercial support roles, while its penetration into core production tasks is progressing more slowly, hence its still limited overall impact. Finally, the main barriers are related to a lack of skills, highlighting the importance of strengthening human capital through educational and training policies. The challenge, therefore, is no longer to demonstrate the usefulness of AI, but to facilitate its deep and widespread adoption where the greatest obstacles are currently concentrated.

Pedro Álvarez Ondina and Javier Garcia-Arenas.

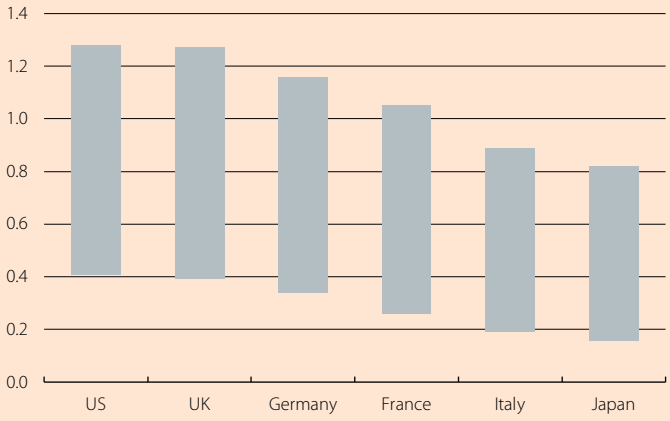
Productivity and employment in the face of generative AI: what do we know?

Generative artificial intelligence (AI) has traits of a general-purpose technology: applications in many sectors, rapid improvement of the technology itself and a catalyst for complementary innovations. This has already happened with technologies such as electricity and the internet. Even so, having high potential does not necessarily mean an immediate or uniform macro impact. The final magnitude of AI's impact will depend on the speed of its adoption and the ability of firms to reorganise processes. This article examines how AI could affect productivity growth and what it means for the labour market.

Striking productivity increases at the micro level

Since the emergence of ChatGPT in 2022, research on the impact of AI on worker productivity has surged. A review by the OECD indicates that, on average, using AI tools can boost individual productivity by around 30%, and some studies find improvements exceeding 50% in specific tasks.[1,2] Many of these studies, conducted in controlled environments where one group of workers is given access to the tool and another is not, find vast productivity improvements in tasks where the technology has a direct application, such as programming or writing.

Estimated productivity gains due to AI
(pps)



Notes: *Average annual increase over the next 10 years. The range captures differences in the speed of the technology's adoption and differences in the sectoral structure of each country.*
Source: *CaixaBank Research, based on data from the OECD.*

These results should not be read as an automatic estimate of the impact on the entire economy. Firstly, they focus on specific tasks, and secondly, they often exclude implementation costs (training, process adaptation, organisational changes, legal or technical frictions). In short, they show what AI can do under favourable conditions, but not necessarily what it will do immediately on an aggregate scale. Even so, they represent a floor. As the technology advances, further improvements can be expected, and the evidence available to date suggests a rapid rate of improvement. Many of the available studies, for example, were conducted before the arrival of autonomous AI agents capable of executing complete tasks without human intervention; if this type of solution becomes widespread, then the productivity gains could increase substantially. There is also a pattern that is repeated in many jobs: among workers performing the same task, AI tends to be of greater help to those who started with a lower level of productivity. In this regard, it acts as a «leveller».

The leap from micro to macro is not automatic

Small-scale advances do not always translate into macro figures. If AI were to have a big impact on a few occupations, then the overall impact could be limited. The Nobel laureate in Economics, Daron Acemoglu, proposes a simple framework for considering this leap.[3] AI boosts productivity in two ways: it automates tasks (replacing human labour) or it complements workers (enabling them to do more and better). Both increase productivity, but with different implications for employment, wages and inequality.

Under certain assumptions, the author shows that the impact of AI on aggregate productivity can be approximated based on two ingredients: (i) the proportion of tasks or occupations actually affected by the new technology and (ii) the average productivity gain in those tasks.[4] Unfortunately, there is significant uncertainty regarding the magnitude of both of these ingredients.

1. «Macroeconomic productivity gains from Artificial Intelligence in G7 economies», OECD Artificial Intelligence Papers, June 2025, nº 41.
2. The productivity metric varies according to the study. In some cases, it refers to time savings, while in others it refers to increases in production within the same time interval. In general, they can be interpreted as savings in labour costs.
3. D. Acemoglu (2025). «The simple macroeconomics of AI». Economic Policy 40, nº 121, pages 13-58.
4. Economic literature distinguishes the concept of a task from that of an occupation. An occupation is a set of tasks, and the automation of a task does not necessarily mean that the occupation is automated. For the sake of simplicity, in this article we will use the words task and occupation as synonyms.

For instance, Acemoglu assumes that 20% of tasks are susceptible to being automated and that, among these, it will only be economically viable to automate 23% of them within the next 10 years. Other authors find higher figures, with 60% of tasks being susceptible to automation and 80% viability among these cases.[5]

Aggregate estimates vary significantly depending on assumptions about the proportion of tasks affected and the average productivity gains. At one end of the spectrum, Acemoglu suggests modest productivity gains of around 0.1 pp per year. With more favourable assumptions, the figures are higher. For example, the OECD estimates that, over the next 10 years, annual productivity growth will increase by between 0.4 and 1.3 pps in the US and by between 0.2 and 0.8 pps in other advanced economies.[6] These are broad ranges, depending on different assumptions about the speed of the technology's adoption and the sectoral structure of each economy, but in no case are they negligible figures.

These exercises do not exhaust all impact channels. AI can facilitate new occupations and business models, and could accelerate scientific innovation. The OECD, for example, notes signs of a virtuous circle of innovation: there is an increase in generative AI patents cited in developments in other fields and, in turn, an increase in generative AI patents that cite innovations from other fields that cited generative AI patents.[7] In other words, AI facilitates innovation in other fields and these accelerate innovation in AI itself.

The adverse effects also need to be included. The economy does not always function as the sum of isolated tasks. A simple example is the so-called Baumol effect: if productivity increases significantly in some sectors but little in others, wages tend to move similarly across sectors. Otherwise, workers would end up moving to where the pay is better. In order to retain them, less productive sectors have to raise wages, even if they do not produce more. The rise in wages in these sectors translates into higher prices and, therefore, the weight of these sectors on final expenditure increases and dilutes the impact of the productivity gains in the more advanced sectors. OECD simulations suggest that this effect could subtract around one-sixth of the potential increase in productivity growth associated with AI.[8]

Furthermore, AI can have harmful uses – disinformation, manipulation, cyberattacks or addictive advertising – that generate negative externalities. If these costs are not reflected in standard metrics, macro gains may overestimate the social benefits.

The labour market: a great unknown

The net effect of AI on employment is ambiguous. On the one hand, automation reduces the demand for labour in the affected tasks. On the other hand, new technologies also create new jobs – the reinstatement effect. This is an important channel. In the four decades following the Second World War, the emergence of new occupations completely offset job destruction due to automation.[9] The big question is whether AI will replicate that pattern and at what pace. There is also a third channel: by boosting productivity, AI could result in lower costs, lower prices, and better products, which could stimulate demand and, therefore, the demand for labour too.

Wage inequality does not follow a single direction either. Unlike other technological waves, such as robotics, which disproportionately affected certain groups, exposure to AI seems to be relatively widespread across occupations of different skill levels, potentially limiting the increase in wage inequality. The IMF notes, however, that higher-income workers are, on the one hand, those at greater risk of having their jobs replaced by AI, but at the same time, those with more potential to benefit from its complementarity.[10]

The institution simulates three scenarios and finds that the effect of AI on wage inequality depends on whom it helps and whom it harms more: if task substitution dominates, inequality could decrease (because higher-paid jobs would be more affected). If complementarity prevails, inequality would tend to increase (because workers with higher qualifications would benefit more). And if AI increases aggregate productivity, wages can rise for everyone, but more so for those who benefit from greater complementarity with AI, once again widening the gap.

5. For a review of the estimates made, see P. Aghion and S. Bunel (2024).«AI and Growth: Where do we Stand?», Policy Note.
6. See footnote 1.
7. «Is Generative AI a General-Purpose Technology? Implications for Productivity and Policy», OECD Artificial Intelligence Papers, June 2025, nº 40.
8. The impact is greater the more unequal the productivity gains are between sectors and the greater the difficulty households have in redirecting their spending towards more productive sectors.
9. D. Acemoglu and P. Restrepo (2019) «Automation and new tasks: How technology displaces and reinstates labor», Journal of Economic Perspectives 33, nº 2, pages 3-30.
10. M. Giovanni, A. Panton, C. Pizzinelli, E. Rockall and M.M. Tavares (2024). «Gen-ai: Artificial intelligence and the future of work». IMF, 979, pages 1-37.

Competition will be a key element

The distribution of the benefits will also depend on the competitive environment. AI can reduce barriers to entry in some markets. Cheaper tools for programming, translating, designing or analysing data can enable small businesses to do things that previously required greater scale. In competitive markets, part of the profits would translate into lower prices and more widely distributed benefits. If, on the other hand, companies capture most of the income – through patents or market power – then the distribution may be unequal.

This tension is particularly relevant in the AI market itself. Economies of scale (larger size, greater efficiency), economies of scope (a single model can be adapted for multiple uses at a relatively low cost) and bottlenecks in access to data to train models, as well as the cost of computing and human capital, naturally drive this market towards greater concentration. It is not inevitable, but it is a plausible risk. Oversight by authorities will therefore be important: not to hinder innovation, but to prevent a technology with the potential to enhance well-being from being sequestered by excessively closed market structures.

In summary, AI will be transformative. Its potential to increase productivity is real, but its deployment will be gradual. Initially, time-saving in specific tasks will prevail. The most significant changes will come later, when companies redesign entire processes and when AI helps accelerate the generation of knowledge and new ideas.

The most reasonable scenario is thus one of increasing benefits in the medium term. This increase will be more intense and rapid in the US than in Europe, given the faster pace of technological adoption and the prominence of the tech sector in the US compared to Europe.[11] In this context, it seems plausible to expect productivity improvements of up to 1 pp annually in the US over a 5 to 10-year horizon, and about half of that in Europe. This would not be an instant revolution, but it would represent a step change for growth.

Oriol Carreras Baquer

11. For further details, see the articles «Artificial intelligence: a supply-side perspective» and «Differentiated strategies for governing AI: towards cooperation or conflict?», in this same Dossier.

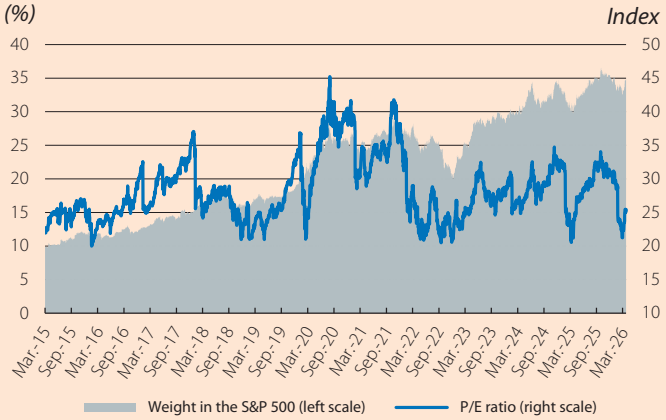
The AI buzz in financial markets

Artificial intelligence (AI) has accounted for much of the recent economic growth[1] and stock market performance in the US. Since the emergence of ChatGPT three years ago, the so-called Magnificent Seven[2] account for 60% of the cumulative increase in the market capitalisation of the S&P 500 and now represent around 35% of the index. The rise of AI has led to hopes of a new industrial revolution and, at the same time, fears of another bubble. This ambivalence extends to stock market valuations: they rest on expectations of vast revenue growth, but at the same time, there are doubts about their sustainability, either because the expectations themselves may disappoint or due to the eye-watering spending and investment plans being drawn up by firms in the sector.[3]

The role of market structure

Although the Magnificent Seven are considered global leaders in AI today,[4] one of the questions for determining whether they will be able to monetise their vast investment plans in time is the shape that the AI market will take and which companies will emerge as winners and losers when the technology matures.

Magnificent Seven: stock market capitalisation and valuation



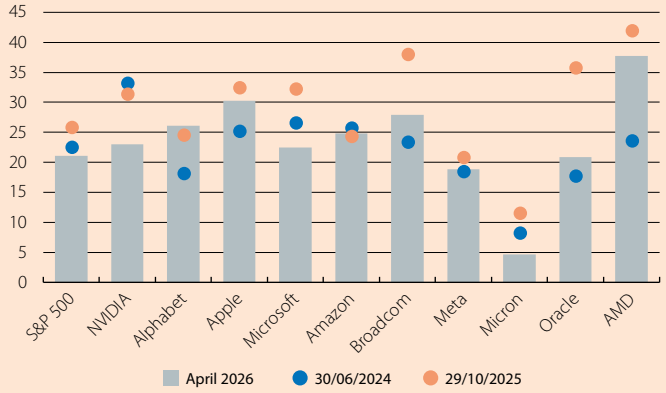
Notes: *The Magnificent Seven are Alphabet, Amazon, Apple, Meta, Microsoft, NVIDIA and Tesla. The P/E ratio is that between the observed market capitalisation and the expected earnings over the next 12 months (Forward Price-to-Earnings ratio). A higher P/E ratio can suggest both higher expectations of long-term earnings and the risk of over-valuation of the stock.*

Source: *CaixaBank Research, based on data from Bloomberg.*

The AI value chain provides insights into the potential evolution of the market. This chain has five layers.[5] Firstly, computing power, with the design of microprocessors and memory chips that manage intensive calculations, where NVIDIA currently stands out in design and TSMC in production. Secondly, infrastructure, with data centres and cloud services and a notable presence of Amazon (Amazon Web Services) and Microsoft (Azure). Thirdly, datasets (images, text, audio) for training AI. The fourth link is large AI models, such as OpenAI's GPT or Anthropic's Claude, which can be adapted to a wide range of tasks. The final layer is applications that adapt these large models for specific use cases, such as Copilot, ChatGPT or Claude Code.

US: P/E ratio of leading AI companies

(Share price divided by expected earnings per share over the next 12 months)



Note: *Companies ranked by market capitalisation from left (highest) to right (lowest). These companies dominate the Bloomberg Global Artificial Intelligence C-Series Index (the index does not include Tesla among its constituent stocks).*

Source: *CaixaBank Research, based on data from Bloomberg.*

Generally speaking, the current technology involves significant investment needs and high fixed costs, which can create barriers to entry in the AI value chain. This applies especially to the first two layers, where network effects are also observed that reinforce the competitiveness of incumbent firms against potential new entrants. The last three layers (data, models, and applications) are, *a priori*, more open to competition (training with public data, open-source code for models and applications), but they also exhibit dynamics that may favour market concentration. For example, if public data as a training source become exhausted (something various experts see as imminent), it will be necessary to resort to private data. Here, established companies such as Meta, Google or Microsoft could reinforce their competitive advantage thanks to the high volume of users of their applications (social networks, such as Instagram or LinkedIn, navigation [Google Maps] or office software [Microsoft 365]).

The complementary connections between the different layers in the chain also favour the dominance of firms that encompass multiple layers in the AI value chain – an integration already exhibited by the established big tech firms. For example, Google also produces its own hardware (TPU chips), builds models (Gemini) and integrates its products with one another.

1. See the article «Productivity and employment in the face of generative AI: what do we know?», in this same Dossier.
2. Alphabet (Google), Amazon, Apple, Meta, Microsoft, NVIDIA and Tesla.
3. This ambivalence is reflected in the P/E ratios (price per share divided by earnings per share, a standard valuation metric) shown in the first two charts: tech firms have above-average P/E ratios, but they have experienced corrections in recent months.
4. J. Frost, K. Rishabh and V. Shreeti (2026). «Global giants in the AI supply chain», Bank for International Settlements.
5. L. Gambacorta and V. Shreeti (2026). «The AI supply chain», Review of Network Economics.

A step change in investment needs

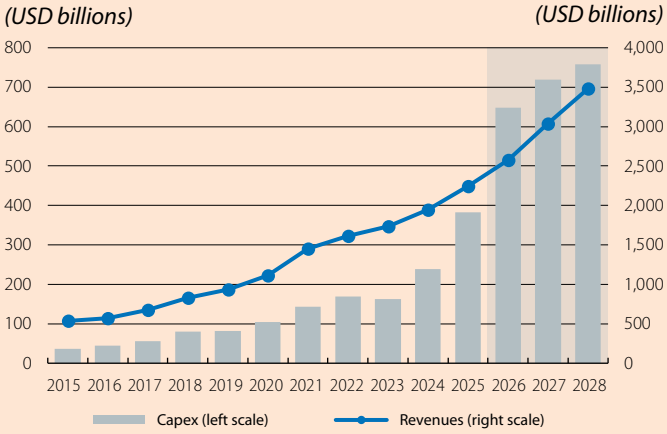
AI not only requires cutting-edge research but also vast investment in infrastructure, particularly related to the computational needs for storing data and training and using models. This investment includes data centres, computer servers, cooling systems, energy facilities, etc. Among the Magnificent Seven, this investment ambition has translated into capex growth of 50% and 60% in 2024-2025, accelerating to 70% in 2026, according to estimates and forecasts by Bloomberg's analyst consensus.

The sharp growth in investment has led to a shift in financing strategies. In recent years, tech firms have taken advantage of their low debt ratios and highly profitable operations to fund their investments with the cash flow they themselves generated. But their spending plans have grown so much that they have become more reliant on external financing (corporate bonds, loans and private credit and venture capital[6]).[7]

A common structure for obtaining external financing links data centres, private equity, and cross-investments among large AI firms.[8] Typically, this formula involves forming a consortium of actors to create a new entity, which will own data centres. That consortium includes, as a minority shareholder, the AI company itself which will pay the rent and operate the data centres. To obtain financing, the entity issues debt, often channelled through private credit[9] or institutional investors, and the servicing of that debt is backed by the income generated from the rental of the data centres. According to the Bank for International Settlements itself,[10] this structure can create circularity and opacity around AI firms' actual level of indebtedness. Furthermore, it tends to create links between the established major AI firms (when they converge in consortia), just like in other cross-investment operations among the leading companies.[11]

Overall, the current AI value chain and the financing strategies and strategic deals between established tech firms exhibit traits that are conducive to market concentration and dominance by incumbents. Besides helping to explain current market valuations, such concentration could pose a source of instability.[12] Nonetheless, how the AI market will actually develop remains uncertain and could result in very different configurations. Regulation, the ease of building new models, and supply dependencies (such as specialised chips) will be key to determining its final structure.

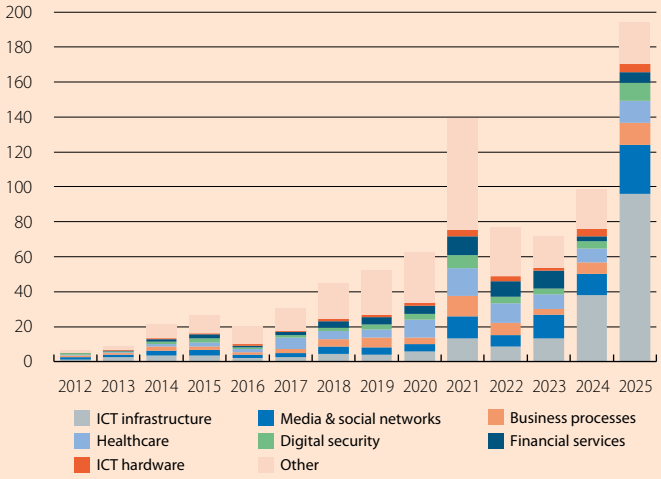
Magnificent Seven: investment in capital goods and revenues



Notes: *The Magnificent Seven are Alphabet, Amazon, Apple, Meta, Microsoft, NVIDIA and Tesla. Forecasts from 2026 onwards.*
Source: *CaixaBank Research, based on data and forecasts from Bloomberg.*

US: AI investments through venture capital

(USD billions)



Source: *CaixaBank Research, based on data from the OECD.*

6. Venture capital is a form of investment that involves providing capital to new or growing companies with a perceived high long-term growth potential.
7. I. Aldasoro, S. Doerr and D. Rees (2026). «Financing the AI boom: from cash flows to debt», Bank for International Settlements.
8. Eren *et al.* (2026). «Financing the AI infrastructure boom: on- and off-balance sheet borrowing», Bank for International Settlements.
9. i.e. non-bank credit granted by specialist investment funds, negotiated directly between lender and borrower.
10. Eren *et al.* (2026), *op. cit.*
11. Bloomberg (2026). «A Guide to the Circular Deals Underpinning the AI Boom», describes various such circular arrangements. e.g. in 2025 NVIDIA agreed to invest 100 billion dollars in OpenAI, while OpenAI committed to operating its data centres intensively with NVIDIA chips. OpenAI and AMD also formed a strategic alliance whereby OpenAI could end up becoming a major shareholder of AMD and, at the same time, committed to purchasing AMD chips worth tens of billions of dollars.
12. For example, by exposing a large portion of the economy to the difficulties of a handful of agents or to bottlenecks, or by increasing the correlation between agents (e.g. correlated market movements that amplify moments of stress). S. Breeden (2024), *Engaging with the machine: AI and financial stability*, speech at the HKMA-BIS Joint Conference on Opportunities and Challenges of Emerging Technologies in the Financial Ecosystem.

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Sectoral Observatory S2 2025

The Spanish economy is going through a phase of strong and widespread expansion, with balanced growth between sectors and significant resilience in a challenging international context. Moreover, the reduction in temporary employment and the current strength of the manufacturing industry, partly thanks to the competitive advantage it enjoys over Europe in terms of energy prices, act as tailwinds for the current dynamism of Spain's economic sectors.

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